T'ANG MUSIC AND MUSICAL INSTRUMENTS *

BY

L. E. R. PICKEN

CONTENTS

I. *Ya yüeh* and *yen yüeh* 76
II. *Tōgaku* and the T'ang repertory 79
III. Dance 82
IV. Musical forms 83
V. Notation 88
VI. Modes 92
VII. Instruments 100
A. Idiophones 100
B. Membranophones 102
C. Chordophones 103
a. Zithers 103
b. Lutes 107
c. Bowed Lutes 115
d. Harps 115
D. Aerophones 116
a. Free aerophones 116
b. Wind instruments proper 117
VIII. Military music 121
IX. Performance 121

To say that Professor Shigeo Kishibe's surveys of the history of musical institutions in the T'ang period had set the stage for this ample study of the *Yüeh-fu tsa-lu* 樂府雜錄 (henceforth *Yftl*) is in no way to belittle Dr Gimm's personal contribution. He has used a text of some fifteen folios as a point of departure for detailed and critical studies of the history of music, spectacle and dance; and he is able to set the whole in the framework of changing institutions, the constitution of which had previously been established by the studies of Kishibe. For the first time a scholarly, well-documented account

*) Observations on reading Martin Gimm, *Das Yüeh-fu tsa-lu des Tuan An-chieh*: Studien zur Geschichte von Musik, Schauspiel und Tanz in der T'ang-Dynastie. Asiatische Forschungen, Band 19, 1966, Otto Harrassowitz, Wiesbaden, 631 pp.

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

has been given of one of the most important late T'ang texts of musical interest. A standard has been set by which future discussions of Chinese texts of musicological interest will be judged.

Dr Gimm's method, combining comparison of virtually all extant versions of the *Yftl* itself with extensive translated extracts from earlier, contemporaneous and slightly later texts, would by itself have provided a most valuable study; but he has done more: he has integrated the *Yftl* text with that of the *P'i-pa lu* 琵琶錄 (henceforth *Ppl*) by the same ninth century author, Tuan An-chieh 段安節. By this means he brings a maximum density of related information to bear on every aspect of the T'ang musical scene revealed by Tuan. What this procedure has meant, in terms of texts scrutinised and read, emerges from every shortest note on every page, and his motto for this daunting enterprise, with its reference to 'five wagon-loads of books', is appropriate.

In addition to providing an exhaustive text-critical study of the *Yftl* and *Ppl*, the author has also sought to provide a history of instruments, of musical theory, of musical forms, of dances and of the repertory itself, in the T'ang period. In consequence, this volume is also a well-documented introduction to the history of Chinese music. It might be argued, that it was unnecessary to resume the history of every topic from the earliest times onwards, in order to see specific points in the *Yftl* in proper perspective; but when information is as well-documented as here, excess can be excused, and many readers, primarily interested in the T'ang period and with little previous musical knowledge, will be grateful to Dr Gimm for this generous treatment. At times, the reader may feel that some of the twigs of the branching trees of inquiry might be pruned without loss; but on the whole Dr Gimm's control of an intimidating mass of information is masterly. His cross-referencing of a very complex volume, for example, is almost faultless.

By a curious accident, the only copy of the *Yftl* in my possession is an edition not used by Dr Gimm, namely, that in the *Tsêng-pu ch'ü-yüan chin chi* 增補曲苑金集. In reading his book, I have followed him in that edition without attempting to retrace his steps through the twenty odd other editions. Indeed I have read him primarily from the standpoint of a musicologist seeking to evaluate purely musical points, but taking occasion to examine both earlier and later texts as the various topics demanded. In this review-article, matters for comment have been collected together under various heads, so as to afford bird's-eye-views of various aspects of the

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

musical situation and, it is hoped, to enable the musically interested reader to find the way quickly to those parts of the *Yftl* and of Dr Gimm's work which relate to particular topics. Some such aid may be welcome since the volume lacks a general index. At certain points it has been possible to add to Dr Gimm's assessment, and if the review is lengthy it is not because there is much to criticise but because this study stimulates comment and invites further inquiry.

I. Ya Yüeh 雅樂 and Yen Yüeh 燕樂

Following the order of the *Yftl* text, the physical environment of the court music, and the nature and number of musical instruments associated with ritual music of the court at various periods, are the first major topics examined, and Dr Gimm makes particular use of ch. 144 of the *T'ung tien* 通典, which he translates *in extenso*. By the end of the T'ang, profound changes in the organisation of the court music and in the music itself had occurred; old institutions had given way to new, old terms had acquired new meanings. The term *têng ko* 登歌, for example, had been applied from Han times onwards to a repertory of pieces performed in a raised and roofed hall on ritual ceremonial occasions and at festal banquets (Gimm, p. 129). By the end of the T'ang Dynasty, however, the term was applied —regardless of the character of the pieces performed—to the ensemble of performers playing under the same conditions. These performers (as first clearly recognised by Kishibe) were the 'sitting division' of musicians (*tso-pu chih* 坐部伎) who performed *t'ang shang* 堂上. They were to be contrasted with a larger 'standing division' (*li-pu chih* 立部伎) who performed *t'ang hsia* 堂下 on an uncovered area linked to the covered, raised hall by a flight of steps. During the T'ang period, the sitting division became the instrumental ensemble responsible for the performance of palace entertainment music of all kinds, while the music itself became progressively more and more secular in character.

To the completion of the process of secularisation, Tuan An-chieh's statement concerning the performance of *fa-ch'ü* 法曲 by the *têng ko* (Gimm, p. 130) bears witness, for the *fa-ch'ü* were new versions (by the Emperor T'ang Hsüan-tsung) of pieces from the Sui repertory coloured by folk and foreign influences.

As a first decisive date at which interest in foreign music can be demonstrated, Dr Gimm cites the visit of Su-chih-p'o 蘇祗婆 (Sujiva?), the Kuchean *p'i-pa*-player, to the court of Sui Wên-

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

hsüan (Gimm, p. 209), and he properly stresses the profound influence on Chinese music and musical theory that stemmed from this musician's demonstration on the *p'i-pa* of the seven diatonic modes and their transpositions—perhaps the most far-reaching external influence to which Chinese music was ever subjected. The extent of assimilation later achieved is suggested by the fact that the *Hu* 胡 division of the palace music (Gimm, p. 549) took its name, not from the importation of musicians or music, but from the source of the instruments employed. It was not the case, for example, that foreign music was confined to the *Hu-pu* (for details, see Gimm, *loc. cit.*).

Tuan's text reveals that the *Shih Ching* pieces, formerly performed in Han ritual, had virtually disappeared in his day; only *Lu ming* 鹿鳴 survived (Gimm, p. 131). Dr Gimm traces the history of each item in turn in the amalgam of ceremonial and entertainment music, both folk and foreign. In the sense of music transformed, this repertory was (as he states) an *Ars nova* (Gimm, p. 135), but there is little fundamental similarity between the process of transformation of music in the T'ang Dynasty and in fourteenth-century Europe. Although syllabic melody in French *virelais* and Italian *laudi* was indeed a new feature in written music of the period (and is also a folk trait), there is no evidence in *Ars nova* of a massive penetration of art music by folk or foreign music; if echoes of Saracenic music reached western Europe, there is little evidence of this. In sum, the musical picture of the *Ars nova* period is very different from that of T'ang China where, by the middle of the period, the boundaries between ritual, popular and foreign music (*ya* 雅, *su* 俗 and *hu yüeh* 胡樂) were no longer apparent in court music. From the time of Hsüan-tsung—that is, from 713—onwards, foreign-influenced entertainment music had achieved the status of a 'new *ya yüeh*' (Gimm, p. 135) and by 866 the old *ya yüeh* had completely disappeared (Gimm, p. 136).

This recognition of the secularisation of the court music is of signal importance in relation to the surviving repertory of the Japanese Imperial Court music—the *gagaku*: *ya-yüeh* repertory. From the standpoint of earlier Chinese musical tradition, it has hitherto been incomprehensible that a repertory, consisting largely of pieces of which the titles figure in Chinese sources as palace entertainment music, often foreign in origin, should be known in Japan as *ya yüeh*—the honoured term for the old music of Confucian ritual. In the light of Kishibe's studies, and of Dr Gimm's

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

detailed analysis of the repertory disclosed in the *Yftl,* it is now plain that this anomalous situation existed in China also, at the Imperial Court itself, from the middle of the T'ang Dynasty onwards. Thus the Japanese *gagaku* repertory is in no way singular: it could be a direct reflection of Chinese court usage. This conclusion necessarily strengthens the claims of this music to be regarded as in part and in some sense a continuation of the music of the T'ang court.

The T'ang period saw not only the acceptance of new music, but also the disappearance of certain kinds of foreign music from the court repertory. The Fu-nan 扶南 ensembles, first adopted by the Sui (Gimm, p. 300), had probably disappeared from court use by the middle of the T'ang. This might mean that the Fu-nan piece in the *gagaku* repertory was borrowed from the Chinese court before 750.

Though the *Tōgaku* 唐樂 portion of the Japanese court music is in name and tradition the most important potential source of vestiges of T'ang music, there are a few surviving Chinese pieces that merit attention. Dr Gimm notes the name *Hu Wei chou* 胡渭州, placed after the title *Ch'ü chê* 屈柘 in the *Lei-shuo* 類說 and *Lü ch'uang hsin hua* 綠窗新話 editions of *Yftl* (Gimm, p. 270), and regards this title as an interpolation. A song to the tune *Hu Wei chou* in the *shang* 商 mode exists, however, among the secular songs of Sung Chiang K'uei 姜夔, who describes it as known in his day as a lost *p'i-pa* tune (see Picken: "Secular Chinese songs of the twelfth century", in *Studia Musicologica,* 8, pp. 125-172, 1966). The identity of mode between *Ch'ü chê* and *Hu Wei chou* may imply some further relationship between them.

A famous Chinese piece is *Ni-shang yü-i* 霓裳羽衣 (Rainbow-skirt and feather-robe), in which Po Chü-i delighted, linked by Sung authors with *P'o-lo-mên* 婆羅門 (*Brāhmaṇa*) (Gimm, pp. 293-298). Dr Gimm doubts that the *P'o-lo-mên* dance was transformed into *Ni-shang yü-i* in 754, as stated by Ch'ên Yang in the *Yüeh shu* 樂書 (ch. 184). Nevertheless, the possibility of a connection with *P'o-lo-mên* is also mentioned by Shên Kua 沈括 (*Mêng-ch'i pi-t'an* 夢溪筆談, ch. 5). It is certain that several musical versions of *Ni-shang* were current in Sung times. Shên Kua mentions an original version in the *tao* 道 mode (p. 98) (a lydian series; final *f*, if *huang-chung* 黃鐘 is *c*), whereas the *Hsien hsien yin ch'ü* 獻仙音曲 (supposedly the equivalent of *Ni-shang* in his day) was in the *hsiao shih* 小石 mode (a mixolydian series; final *g*, if *huang-chung* is *c*). Chiang K'uei preserves one movement from an old score seen by him in 1186, again in a

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

shang mode, but in a different key, and he mentions the statement of Po Chü-i that *Ni-shang* was in the *tao* mode. The ninth century *Chieh-ku lu* 羯鼓錄 of Nan Cho 南卓 also lists a *P'o-lo-mên* in the *shang* mode, though in yet another key (*t'ai-tsu shang* 太簇商; a mixolydian series, final *e*, if *huang-chung* is *c*). Thus the statements regarding the modality of *Ni-shang* and *P'o-lo-mên* made by Shên Kua, Chiang K'uei and Po Chü-i are all consistent with the existence of two modally distinct versions—ignoring the key-differences between the *shang* versions. This conclusion gives some support to Dr Gimm's view that there were two separate traditions, a Buddhist *P'o-lo-mên* dance, perhaps with male dancers, and a Taoist *Ni-shang yü-i* dance, for female performers. On the other hand, the versions in the *tao* mode and the various transposed *shang* modes may have been modally closer than the analogous terms lydian and mixo-lydian may suggest, if the fourth of the *tao* mode was not sharpened (p. 93)—if the mode was, in effect, an ionian series. The only difference between the modes would then have been that the seventh was flat in the *shang* modes and sharp in the *tao* mode.

Echoes of Buddhist ceremonial or liturgical music survive of course in the *ch'in* 琴 repertory to the present day. Analogous in title to the *P'o-lo-mên chou* ||| 咒 (*Brāhmaṇa-dhāraṇī*) (Gimm, pp. 296, 297) is the tune *Shih-t'an* 釋談 from the Ming handbooks, which appears as *P'u-an chou* 普安咒 in tablatures of the early eighteenth century.

II. Tōgaku and the T'ang Repertory

Particular interest attaches to the history of those pieces, mentioned in the *Yftl*, the names of which survive in the *Tōgaku* repertory. In pursuing the origins of these names and assembling additional sources in which they occur, Dr Gimm carries inquiry further than any of his predecessors working from the Japanese side—for example, Tanabe and Eckardt. On the musical side, the most extended and musically informed recent study of *Tōgaku* is that of Dr Robert Garfias (*The Tōgaku style of Japanese court music: an analysis of theory in practice*, Ann Arbor, 1965) who, however, was concerned rather with practice than with origins. In my view, that which the Japanese received from the Chinese Court is not to be found in the musical surface of *Tōgaku* as heard today. It has been argued elsewhere (Picken: "Central Asian tunes in the *gagaku* tradition", in *Festschrift Walter Wiora*, pp. 545-551. Bären-

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

reiter, 1967) that, encouraged perhaps by the aura surrounding the very name *ya yüeh*, the original pace of the tunes is reduced in modern performance, and the melodic surface presented by *hichiriki* (p. 118) and transverse flute *fue* 笛 has become decorated in a characteristic manner, more in accordance with Japanese taste. In search of authentic vestiges of the original tunes, it is advisable to look to the part-books of the most inflexible of the instruments in the *gagaku* ensemble, the mouth-organ *shō* 笙. The mouth-organ tunes are so distinctive in their various styles, so convincing as music, and so different from any other Japanese or Chinese music known to us, that there seems good reason to accept them, at least provisionally, as genuine relics of the mid-T'ang repertory. At the time of writing the article referred to, the *engaku* (*yen yüeh*) character of so much of the *gagaku* repertory was perplexing. As already stressed (p. 77), Dr Gimm's study removes this perplexing feature.

Some of the points raised in his discussion of the history of the various pieces in the T'ang repertory can profitably be examined in the light of the actual tunes that bear today the same names. The mouth-organ versions of *Lan-ling Wang* 蘭陵王 or *Lo-ling Wang* 羅 | | (Gimm, pp. 178-183), in either modal version, are not acceptable as Chinese tunes in the light of other early medieval Chinese music, either from the standpoint of modal organisation or from that of melodic movement. This accords with the idea of a later equation of a piece, possibly of Indian origin, with the old Chinese title (Gimm, p. 183). On the other hand, the mouth-organ part for the *Hsin Lo ling Wang chi* 新 | | | 急 (in *ichikotsuchō* 壹越調 and *sōjō* 雙調 modal versions) is precisely the type of melody postulated as suitable for T'ang lyrics of eight 7-syllable lines (see Picken, *op. cit.*, 1966).

Pa-t'ou 拔頭 (Gimm, pp. 184-186) belongs to a group of mouth-organ tunes that are plainly neither Chinese nor Japanese; their consistent use of syncopated isorhythmic patterns might indicate a Sogdian (and ultimately Indian) origin. This group includes *P'ei-lu* 陪盧, *Hsi Wang yüeh p'o* 西王樂破, *Su-mo-chê* 蘇莫者, *Huan ch'êng yüeh* 還城樂 and *Lun-ku hun-t'o* 輪鼓褌脫. Since *Hun-t'o* 褌脫 and *Su-mo-chê* (cf. Pāli *samajja*; Gimm, p. 193, with reference to Eckardt) are alternative names for the same dance in the Chinese sources, and since the mouth-organ parts of these two tunes (*Lun-ku hun-t'o* and *Su-mo-chê*) are rhythmically closely related, are in the same mode (though in different keys), and make use of the same cadential formula, it is possible that something

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

of the original *Hun-t'o* is preserved in the mouth-organ parts. In Japanese tradition, all these tunes are associated with countries to the west of China; their mouth-organ parts are all tunes of the same basic kind in syncopated triple rhythms.

The tunes linked with drunken foreigners are also of interest (Gimm, p. 191). *Hu yin chiu* 胡飲酒 (in *ichikotsuchō* and *sōjō* versions) is a tune of quasi-'classical' melodic structure (in the western sense). It is built up from musical lines each consisting of two measures of four beats, and each pair of measures is a balanced structural unit. The complete tune gains cohesion from the use of the same rhythmic pattern in different measures. Similar in character is *Chiu Hu-tzŭ* 酒胡子. Neither tune is comparable with any previously known Chinese material, but both would be acceptable to Chinese taste, since the one is pentatonic and the other hexatonic.

A musical link exists between *Chiu Hu-tzŭ* and another tune in the *gagaku* repertory, *Wu-tê yüeh* 武德樂, and may be of some importance. Both tunes share the same last musical line. Bearing in mind the folk character of the martial *P'o-chên yüeh ch'ü* 破陣樂曲 or *Ch'i-tê wu* 七德舞, expressly stated in the words of the Emperor T'ang T'ai-tsung in 627 (Gimm, p. 215), it is possible that a piece played at every audience at the court of T'ai-tsung is reflected in a piece with the more general, but related, title *Wu-tê yüeh.*

Among the titles of so-called 'soft dances' (*juan wu* 軟舞; Gimm, p. 257), that of a *Ch'un ying chuan sa-t'a* 春鶯囀颯踏 survives in the *Tōgaku* repertory, together with its *ju-p'o* 入破 (Gimm, p. 227). The former is in eight-beat measures, the latter in six-beat measures; but the most striking feature of the two is that the *ju-p'o* is a version of the same tune, rhythmically transformed by systematic elision or contraction: each corresponding pair of measures in the two movements reaches the same point in the melody; but the shorter, six-beat measures do so in fewer notes. This is one of the few surviving clues to the nature of the structural relationships that may have existed between different movements of T'ang *ta-ch'ü* 大曲 and will be discussed later (p. 84).

The name of the T'ang horse-dance tune, *Ch'ing-pei yüeh* 傾盃樂, also occurs in the *Tōgaku* repertory. According to An Cho's *Chieh-ku lu*, the mode of this piece was *shang*, and the *gagaku Ch'ing-pei yüeh chi* | | | 急 is basically in the *shang* mode; at two points, however, it modulates into the *chiao* 角 mode (p. 00) by flattening the third. Although the piece would seem to have been Chinese in origin

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

(Gimm, p. 258), An Cho includes this tune in the list of pieces from the Kuchean repertory. The modulation of the mouth-organ part of the existing *Tōgaku* tune is un-Chinese, and the use of broken triads as melodic phrases is also most un-Chinese—the reprise of the tune begins: *b b e e g♯ a b' b'*. It is worth mentioning that, while the mode of the *Tōgaku* piece agrees with An Cho's testimony, the mode is said to be *kung* in the *T'ang yin kuei-ch'ien* 唐音発籤 ch. 13 (Gimm, p. 517).

The existence of a *Hsin ch'ing-pei yüeh* title in Tuan's text (Gimm, p. 516) is important in relation to certain Sino-Japanese titles, such as *Hsin Lo-ling Wang* (p. 80), for it implies that the presence of a qualifying *hsin* 新 in a *gagaku* title need not necessarily indicate a post-T'ang Japanese revision of the tune in question.

A *Yeh-pan yüeh* 夜半樂 piece (Gimm, pp. 480-482) also occurs in the *Tōgaku* repertory. Its mouth-organ part is a most impressive tune in a *chiao* mode. Although the occasion of the composition of the Chinese piece of this name is certain: a palace revolt forestalled, the special qualities of the mouth-organ tune may have been inspired by a reminiscence of a more sinister occasion, when Wei Ling Kung 衞靈公, encamped on the bank of the P'u 濮 river, 'heard at midnight a tune played on the *ch'in*', *yeh-pan shih wên ku ch'in shêng* 夜半時聞鼓琴聲. The tune heard was the *Wang kuo yin* 亡國音 (Gimm, p. 417). The mouth-organ part of the *Yeh-pan yüeh* in the *Tōgaku* repertory begins with no less than ten repetitions of the same note. This recalls the reiterated notes, at the unison or at the octave, which form so characteristic a feature of *ch'in* idiom. The tune could indeed be transferred as it stands to *ch'in* or *chêng* with good effect. In the atmosphere of revolution narrowly forestalled, a reminiscence of the *Wang kuo yin* story may have seemed appropriate. Whatever the explanation may be, the affect of this tune is not that of a military triumph but that of a dirge.

How the various items in the repertory were used at a typical court reception is explicitly set out in a summary account from the *Tzŭ-chih t'ung chien* 資治通鑑 (Gimm, p. 519). The entertainment covers the entire 'musical' spectrum from ritual, through military music to *Ni-shang yü-i*, followed by dancing horses, rhinoceroses and elephants.

III. Dance

The observations on dance-spectacles in the middle and late T'ang (Gimm, pp. 133-137) include the important point that the numbers

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

of dancers (commonly multiples of eight), and their movements in particular dances, remained approximately the same as in the old *ya yüeh*, so that a close visual link with earlier dances persisted, even though the music had changed. This greater resistance to change of the dance itself as compared with its music invites comparison with the history of dance in other cultures.

A rare glimpse of a dance in action comes in the account of the *Yün-shao yüeh* 雲韶樂: Five dancing boys each carry a golden (or gilded) lotus. 'Each, holding a golden lotus, leads the dancers. The golden lotus resemble the following of the Way by Immortals' (translating a little differently from Dr Gimm; Gimm, p. 140).

Among athletic dances, those performed on balls by female dancers, *Hu hsüan* 胡旋 (Gimm, pp. 264-267), originally from Samarkand (K'ang 康), are of interest since the region of origin is precisely stated. *Hu t'êng* 胡騰, the jumping dance (Gimm, pp. 267, 268), was evidently of the same type as the 'Cossack' dances common today over the whole of the Southern states of the U.S.S.R. and indeed extending westwards into Anatolia and Czechoslovakia. The 'calls' ('words in their own language') are still to be heard from dance-leaders in other parts of Asia—in North-eastern Turkey both from Turks and Laz—where they anticipate changes in the figures of the dance.

IV. Musical Forms

No attempt will be made to summarise Dr Gimm's exhaustive review of what he well names 'das *Ta-ch'ü*-Problem' (Gimm, pp. 224-230), and comments will be restricted to points where a little more light now comes from purely musical sources. Reference has been made (p. 81) to the precise formal relationship between *Ch'un ying chuan sa-t'a* *) and *ju-p'o*. In the known sequence of *ta-ch'ü*-movements, the *sa-t'a* followed the unmeasured *ko* 歌 in the first main division of the *san-hsü* 散序 (Gimm, p. 226). The *Tōgaku sa-t'a* (the two syllables are used alternatively in Chinese texts) consists of sixteen measures of 'quick eight beats' (*tsao pa p'ai* 早八拍), with an accent (marked by a drum-stroke) on the seventh beat.

Among pieces in the *Tōgaku* repertory there are also two *yen* 塩, *Ho-huan yen* 合歡塩 and *San-t'ai yen chi* 三臺塩急. If, as seems probable, this *yen* is a graphic variant of 引, these two movements

*) A modal variant bears as title the term *sa-t'a* only.

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

may preserve a clue to the organisation of the second movement in the *san-hsü* (Gimm, p. 225). Both are pieces of sixteen measures of 'quick four beats' (ignoring repeats of the complete structure) with an accent on the third beat of the measure. (For *San-t'ai yen* see Picken, *op. cit.*, 1967).

Another piece can be fitted into the structure, since Chiang K'uei's song, based on a movement from *Ni-shang yü-i*, was the first section of two that together constituted the *chung-hsü* 中序. This song has been reconstructed as a non-repeating structure of 8+8 measures of 8 beats, perhaps with an accent on the seventh beat (Picken, *op. cit.*, 1966).

Turning now to the third major division of the *ta-ch'ü*, the *p'o* 破, the *ju-p'o* of *Ch'un ying chuan* consists of sixteen measures of six beats, with an accent on the fourth beat. The titles of some of the remaining sections of the *p'o* include the word *kun* 衮 (more commonly 滾); this is suggestive. In *p'i-pa* technique, this word implies not merely (as Dr Gimm, p. 228, suggests) a particularly rapid type of playing, but especially a *tremolo*—the rapid repetition of a note by regular striking of the same string by plectrum-strokes in opposite directions, or by thumb and first finger striking in opposite directions. The final term *sha-kun* 殺衮 may mean either a progressively decelerating *tremolo* or the abandonment of *tremolo* decoration.

In tabular form, then, as possible rhythmic frameworks or rhythmic attributes of the various *ta-ch'ü* movements we have:

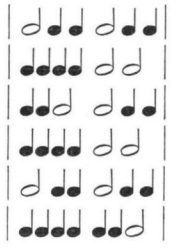
Major divisions	*Subsidiary Divisions*	*Rhythmic Structures*	*Rhythmic Attributes*
San-hsü	*Ko*		unmeasured
	Yin or *Yen*	16 × 4 (..o.)	
	Sa, *T'a* or *Sa-t'a*	16 × 8 (.....o.)	
Chung-hsü	One of two movements	16 × 8	
P'o	*Ju-p'o*	16 × 6 (....o.)	
	Kun, *Chung-kun*, *Sha-kun*		*tremolo*, increasing and then decreasing in frequency

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

These data must be regarded as provisional until the part-books of all those *Tōgaku* pieces that are no longer in the current repertory have been examined in search of further examples. Though these structures appear to be rather small (16 measures long), the number of examples from the *Tōgaku* repertory is sufficient to establish beyond doubt the validity of this length for pieces preserved in the Japanese tradition. It is noteworthy that the *chung-hsü* of a version of *Ni-shang yü-i* is of the same length, and that most of the tunes in the late T'ang MS. Pelliot No. 3808 are also of this length if, as in *gagaku* tunes, a single *p'ai* falls to a measure.

In performance, of course, these pieces would be repeated. Repeats, with alternative beginnings and ends, are marked in the part-books of *Tōgaku* pieces and in the T'ang MS. previously mentioned. How often repetition occurred was probably determined by circumstances, as in *gagaku* performance today. Dr Gimm, discussing the piece *Ho Man-tzŭ* 何滿子 (Gimm, pp. 343-345), cites Po Chü-i's poem of the same title and its reference to four *t'iao* 調 (or *tz'ŭ* 詞 or *yün* 韻) and eight *tieh* 疊. In the light of the structure of the well-known *ch'in* melody *Yang-kuan san tieh* 陽關三疊, with its three-fold repetition of a single tune (varied) and refrain (invariant), it is probable that *tieh* were repeats, varied to greater or lesser extent. Whether *t'iao* or another term is the original term in this poem, it is at least possible that the text refers to a piece consisting of four song-tunes and eight repetitions of these.

The *tz'ŭ* model *Ho Man-tzŭ* (Gimm, p. 344) implies a stanza-form of six musical lines of equal length (remembering that it was a dance-song); the first five lines were fitted to text-lines of six characters, the last to seven. The rhythmic structure could have been of the following kind:



Terminal minims could have carried the rhymes. Such a pattern might be diversified in a number of ways. If the tune sung to this pattern included occasional ligatures—that is, if syllables were occasionally sung to a sequence of two adjacent quaver notes—it

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

would be musically as satisfying as the secular songs of Chiang K'uei. The pattern shows the extent to which such data can now be tentatively interpreted in the light of existing tunes.

The character of such song-tunes can be plausibly surmised in the light of Chiang K'uei's *tz'ŭ* melodies (Picken, *op. cit.*, 1966). From these it is also clear that whatever the original sense of *man* 曼 may have been (Gimm, p. 245), when applied to songs of Chiang K'uei's day it meant a song with a relatively long song-text of *ca.* 50 characters, the tune of which contained more long notes than the shorter song, *ling* 令, of *ca* 30 characters. In relation to the delivery of the text, therefore, the *man* moved more slowly than the *ling*.

The surviving relics of early medieval Chinese song yield no evidence that early *tz'ŭ* were markedly melismatic, as is suggested (Gimm, p. 230). It has been shown (Picken, *op. cit.*, 1966), that the irregularity of line-length in *tz'ŭ* is a universal characteristic of syllabic songs (that is, of songs sung one-note-to-one-syllable) provided that the tunes to which the texts are sung are in notes of at least two time-values. The statement in the *Pi-chi man-chih* 碧雞漫志 that the *Yang-liu chih* 楊柳枝 (Gimm, p. 512) piece had three extra characters added to each *chü* means, presumably, that each musical line had three notes extra to the eight-beat scheme which had to be fitted with words; that is to say, instead of a rhythmic pattern such as ♩♩♩♩♩♩♩𝅗𝅥, for the line of seven characters, the pattern would be something like ♩♩♩♩♩♪♪♪♪♩. Three *extra* characters to the line does not imply a melisma, as Dr Gimm suggests; three *less* characters per line might.

Looking now at the structure of the *ta-ch'ü* as a whole, the parallel with European dance-suites was indicated by Yin Fa-lu 陰法魯 more than twenty years ago (Gimm, p. 224). Parallels with Eastern cyclical forms are perhaps closer, however. The unmeasured introductory movement(s) of *ta-ch'ü* recall the unmeasured *ālāpă* in the exposition of a *rāgă*; the appearance of *kun* in the third section recalls the use of repeated notes in the later stages of *gat*, whether as in *jhalā* or as in *tarparan*, in Hindustani music. Perhaps the closest parallels to ancient *ta-ch'ü* are to be found in the surviving cycles of the Uygur *un ekaki mugham* ئون ئىككى مۇقام (twelve *maqam*), the Tadjik *shashmakom* (six *maqam*) and the *makom* (= *maqam*) of the Horazm tradition. All three are collections of pieces, grouped on the basis of identity of mode (*maqam*). In the Uygur set, the cyclical, suite-like structure is still explicit, and in all three traditions, the songs or instrumental pieces are composed

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

pieces, preserved by oral tradition—with the exception of the Horazm tradition, which preserves tunes in a unique notation. These traditions thus resemble the Chinese tradition more closely than does the modern Hindustani tradition, where improvisation plays a dominant role.

In the Uygur (*Hsin-chiang Wei-wu-êrh* 新疆維吾尔) 12 *mugham* (十二木卡姆) (Yin-yüeh ch'u-pan-shê, Min-tsu ch'u-pan shê, 1959), each *mugham* is a cycle consisting of three major sections. Taking the first *mugham—rāk mughami* مۇقامى راك, that is, Iraq mode—as an example, this opens with a first section, *chuk naghamé* چوك نەغمە in thirteen movements. Eight of the thirteen are pairs—for example *pishro* (= *peşref*) پەشرۇ and *pishronak mahraghulā* مەرغۇلى پەشرۇنىك— rhythmically, and to a limited extent melodically, related also. This section is followed by a set of *dastan* داستان, eight in all, again made up of pairs, this time of rather more closely related movements. The third section is *mehshrahp* مەشرەپ and consists of two movements of this title. This last term is highly suggestive, for *mızrab* is the plectrum, and these fast final movements evidently make much use of *tremolo* (cf. *kun*, p. 84).

The first movement of the *chuk naghmé* (first section) is *mughamanak bāshlenshi* مۇقامنىك باشلىنىشى, the beginning of the *mugham*; it is both slow and unmeasured. The other movements in the first section are measured. The metronome speeds for the various transcribed pieces increase throughout the cycle from ♩ = 58 to ♩ = 152 for the fastest *dastan*; and the length of measure decreases from 5/4 and 4/4 to 2/4 and 7/8. Clearly, there may be rather more than a superfical parallel between Uygur *mugham* *) and the great cyclical forms of the T'ang.

On the other hand, the individual pieces in a *mugham* are more extended works, and more complexly organised, than any of the structures surviving in mouth-organ part-books of pieces from the *Tōgaku* repertory, and the Uygur pieces do not exhibit so clearly the 'classical' type of melodic organisation previously referred to (p. 81). In effect, they are less 'western' in character than some of the mouth-organ tunes preserved in *Tōgaku* part-books today.

---

*) I am indebted to my colleague, Mr Farhang Jahanpur, for assistance in the transcription of terms from the Uygur text. Since a number of the terms are Persian, it seemed advisable to adhere to standard Persian transcriptions for all terms, though some are evidently Turkic.

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

V. Notation

Dr Gimm's assembled references to notations of various kinds and his comments thereon (Gimm, pp. 465-469) are valuable. In these few pages he performs a great service for musicologists, and there are few points to question or to add. Ten years ago I too seized on Duke Ling's command to Shih Chüan (6th century B.C.; Gimm, p. 97): 爲我聽而寫之 (*Han-Fei-Tzŭ*), as the first reference to notation in Chinese sources. It was Mr. Piet van der Loon who pointed out to me that in this context 寫 means no more than to copy. This is indeed confirmed by internal evidence both here and in the *Shih Chi* version of the same story. In the latter text it is stated that Shih Chüan 'sitting formally [as a trained *ch'in* player should], took up the *ch'in* and listening copied (*hsieh*) it.' It is unnecessary to have an instrument at hand in order to write down a tune; but an instrument is essential if one is not merely trying out a tune but also endeavouring to imitate a performance, including the registration of the tune—whether on open strings or in harmonics, for example (p. 105). By the same reasoning, the *Ch'in ts'ao* 琴操 quotation (Gimm, p. 419), where again an instrument is involved, may refer to copying the performance of a tune recollected (p. 116).

The matter of rhythmic patterns and their notation in Chinese music before, and during, the T'ang period is one of great interest, and the hints in Tuan's stories are important. The author (Gimm, p. 281) is inclined to dismiss the tradition that Huang Fan-ch'o 黃幡綽 was himself an expert performer on the beat-clapper (*p'ai-pan* 拍板), and to regard the story of his drawing two ears on a sheet of paper, in response to the Emperor T'ang Ming-huang's request for a method of recording the *p'ai-pan* (*p'ai-pan p'u* ‖ 譜) (Gimm, p. 464), merely as an example of his ready wit; but such a request cannot have been addressed to him because he was a wit, however witty his response.

In this context, the translation of *p'u* by 'tablature' is not acceptable. The European concept of tablature may properly be extended to non-European methods of writing music whenever the performer is shown where and how to place his fingers, rather than what note to play. In this sense, the term is valid in the translation of *ch'in-p'u* 琴譜, for example, even though tablature in the European sense was developed for part-music rather than monody. But the punctuation of a musical text, or the punctuation of a song-text, in order to mark rhythmic divisions, does not amount

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

to a tablature; it is no more than making a non-verbal record of the beat—hence a *p'u*.

Such evidence as exists regarding the nature of musical rhythm and metre in the T'ang period is largely indirect. The case for supposing rhythms to have been binary rather than ternary, and conceived in terms of a large period or measure of eight beats (or in measures of half this length), has been presented elsewhere (Picken, *op. cit.*, 1966). As seen already (p. 80), the part-books of *Tōgaku* exhibit rhythmic patterns of this kind *). Furthermore, these patterns differ one from another in the placing of the main drum beat within the framework of beats. It must not be supposed that relatively simple rhythmic structures of this kind predicate monotonous music; on the contrary, the metre of individual musical lines within the rhythmic framework is susceptible of infinite variation, provided only that at least three different note-durations (in the ratio of 1 : 2 : 4) are used. The tune itself then moves in rhythmic counterpoint with the fixed framework of equal beats, and the listener is reminded of this framework from time to time by the regular, accentuated beats of a percussion instrument. The stresses of the vocal or instrumental melodic line do not necessarily coincide with the regularly recurring stress in the rhythmic pattern, so that there is an interplay between tune and rhythmic framework.

In order for a Chinese singer or instrumentalist to reproduce another's musical performance, therefore, it was not enough (and still is not) merely to know the notes of the melody; it was essential to know the relationship between melody and rhythmic framework. (To this day, an amateur would not sing a *K'un-ch'ü* 崑曲 aria without marking the rhythm with a *p'ai-pan*). This is why *chieh-tsou* 節奏, literally 'division-playing', was so important. Take the story of Chang Hung-hung 張紅紅, the eighth-century Imperial concubine, counting beans behind a curtain while a new version of an old tune is sung for the first time in her hearing (Gimm, p. 236): 'By means of small beans she counted and recorded its *p'ai*' (以小豆數合記其拍). In this way she would be able to determine the skeletal structure of the piece in numerical terms: how many measures and beats to the stanza; how many stanzas in all. She would note the number of beats to the measure, as well as where the main beat fell within each measure, and her learning of the air would be linked with the

*) In living *gagaku* practice, however, each 'beat' marks an entire 'bar' in the western sense.

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

fall of successive beans. Such a musician might well not use (or be able to use) written music at all; there would certainly be no need for her to do so, if she were as gifted as the story suggests. Clearly she had an excellent musical memory; but compared with Mozart's copying of the Allegri *Miserere* (nine vocal parts for two choirs), her feat is not outstanding.

Yang Chih 楊志 (Gimm, pp. 310, 311), in theory at least, could have obtained a fuller record than Chang Hung-hung. 'He girt about him a greased leather belt, and with his finger marked and recorded the rhythm'—perhaps a fuller record, since he could readily mark strong and weak beats—using the two edges of the belt, for example. The belt was greased, presumably, so as to make the leather soft enough to receive a finger-nail impression. Again, the recorder must have had a remarkable musical memory. It is not possible that he should have recorded what Dr Gimm refers to as 'die Melodielinie'. With such limited possibilities of making differentiated signs one cannot record music; a rhythm, however, could be recorded.

The author's note on Taoist liturgical notation (Gimm, p. 467) can be amplified somewhat. The Ming *Tao-tsang* 道藏 preserves hymns in what appears to be a neumatic notation, that is, each syllable of the text is associated with wavy lines that might be a graphic record of pitch-change during the melismatic singing of that syllable. Through the kindness of Mr Kristofer Schipper, a member of the Ecole française d'Extrême-Orient now residing in Taiwan, I have been able to compare recent recordings of Taoist hymns with notations in the *Tao-tsang* (||, 洞玄部, 讚頌類 333, 玉音法事卷上, 中). Unfortunately, none of the hymns recorded was textually identical with the printed versions. According to Mr Schipper, Taoists of Taiwan know that notated hymns formerly existed, but no one has as yet given evidence of being able to read the Ming notation. Two specimens of this notation were printed in facsimile in *Chung-kuo yin-yüeh shih ts'an-k'ao t'u-p'ien* 中國音樂史參考圖片, Series 5, Peking, 1958. In relation to the general problem of Chinese conceptions of rhythm, it is important to note that these highly melismatic hymns, recorded by Mr Schipper, begin apparently unmeasured and become measured as they proceed. Closer examination reveals, however, that part at least of the unmeasured section consists of later, measured material, but delivered at a very much slower pace, and in a free *parlando* style, so that the rhythmic structure can no longer be felt. Nevertheless, it exists, in some

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

sense for the singer, who marks 'beats' with a hand drum even in this retarded version.

It has been shown elsewhere that the term *p'ai* underwent an extension of meaning such that a 'beat' came to stand for the measure which it defined: the interval between two beats—blows of the *p'ai-pan*—was a 'beat' in another sense. This meaning is implied by Chiang K'uei's use of the term *p'ai* in the preface to his '*shao* in the *chih* mode' (Picken, *op. cit.*, 1966, p. 158) when he states 前兩拍是徵調 'the first two *p'ai* are in the *chih* mode'. Only a substantial segment of a melody can be said to be in a mode. The comment by Han Yü: *yüeh chü* 樂句 (Gimm, pp. 464, 470, 471) is revealing, for *chü* in a musical context, like *chü* in the written language, is likely to be no less than a meaningful musical sentence or phrase. This is something more than a 'bar' in Western music ('Takt', Gimm, p. 471). The linking of the term *yüeh-chü* with *p'ai-pan* implies that the *chü* in music was both a musical line or phrase and a measure of duration. In punctuating (literally) a song-text by marking the *p'ai*, the musican also marked off segments of song-text to be sung as measures of equal duration—had they been unequal in duration they could not have been marked by *p'ai*. I cannot, therefore, accept Dr Gimm's view that *yüeh-chü* in the *Yftl* text denotes no more than a musical time-unit. The use of *chü* rather than, say, *chieh* 節 surely indicates a unit of meaningful musical language, as well as a time unit; it means, I suggest, a musical line or half-line beginning and progressing to a close or half-close within the time-space of a fixed measure.

In translating from the *Pi-chi man-chih* Dr Gimm (p. 406) supplies *pan* in the sentence: 'Niu Sêng-ju nannte das *P'o-(pan)* auch *Yüeh-chü*'; but if *p'ai* already had in T'ang times the extended meaning it had during the Sung period, the addition is unnecessary. In the Sino-Japanese headings to *gagaku* pieces, *p'ai* occurs both as a 'beat' and as a 'measure'.

The term *hua shih-pa* 花十八 in the account of *Liu-yao* 六么 by Ou-yang Hsiu 歐陽修 (Gimm, p. 361) invites comparison with the old popular tune, still current, *Ho-nan shih-pa pan* 河南十八板. This is a tune that may once have consisted (as inspection suggests) of eighteen short measures. It now exists in such varied forms, however, that it would be difficult, without a comparative study of many versions, to be sure of this. The parallel with *shih-pa pan* is made still closer by the occurrence in the same passage from Ou-yang Hsiu of the expression *shih-pa p'ai*, since *p'ai* and *pan* came to be equivalent terms.

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

VI. Modes

The table of twenty-eight *tiao* 調 *) includes some of the most important purely musical information in the *Yftl.* Dr Gimm devotes considerable space (pp. 550-558) to a detailed examination of the table and its interpretation. In so doing, however, he postulates relationships with the *lü-lü* 律呂 which are not given in Tuan's text. The table can be interpreted, however, in its own terms, without reference to any later text, and it is proposed to do this in the following pages.

The suggested substitution of 綸 for 輪 is probably unnecessary, for the sequence of the five degrees of the basic pentatonic scale (*kung* 宫, *shang* 商, *chiao* 角, *chih* 徵, *yü* 羽) has been recognised as a cycle (輪) at least since the date of the Sung *Shih-lin kuang-chi* 事林廣記. In that work (see the *Yin-p'u lei* 音譜類) appears, perhaps for the first time, the characteristic wheel-diagram of the rotation of the cycle of notes concentric with the cycles of the *lü* 律 and of the months. Diagrams of this type are constantly repeated in later handbooks of music, and as recently as 1932, the Commercial Press reprint of Chu Tsai-yü 朱載堉, *Yüeh-lü ch'üan-shu* 樂律全書 included rotateable models, based on this principle. Working models of this kind were being made by *ch'in* players up till 30 years ago. Accepting 輪, the chapter-heading then becomes: 'Classification of music: Table of the twenty-eight modes and-transposed-modes based on the cycle of the five degrees.' Perhaps the first 調 of the first section (Gimm: 1.) should be read *t'iao*[2] 'blended' rather than 'bestimmt'. The end of this section can be more simply and directly rendered as: 'The fifth degree of these [sounds] is sounded, but its mode is not represented'.

The traditional exclusion of the *chih* modes (Gimm, p. 551), referred to in the last sentence of the previous paragraph, is indeed puzzling, but I do not think this exclusion can have been due merely to the presence of a perfect fourth (rather than an augmented fourth) between the final and the fourth degree of the mode, since the perfect fourth is accepted in *shang* modes. In this discussion (*loc. cit.*), Dr Gimm refers to the *pien* 變, in the basic series starting on *c*, as *f* and *b* (N.B.: *b* is here *b*♮, as in English usage, not *b*♭, as in German usage!); but it is not certain that this was the basic form generally

*) In the sense of 'mode'—whether in root position or transposed—this term is pronounced by Chinese musicians without aspiration, in my experience.

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

in use by the late T'ang. In Sung, in Shên Kua's time, the fourth was undoubtedly still augmented in many cases, since none of the sets of pitches he precisely defines includes a note that could serve as a perfect fourth (補筆談 ch. 1). The question whether the fourth degree of a seven-note diatonic scale should be a perfect or an augmented fourth had been discussed already in the *Sui Shu* ch. 14: *Ch'ing-yüeh huang-chung kung i hsiao-lü* (= *chung-lü*) *wei pien-chih* 清樂黃鍾宮以小呂爲變徵 'the altered fifth degree is *f* in the *kung* mode starting on the fundamental (*c*) in *Ch'ing-yüeh*'. The Sung *Shih-lin Kuang-chi* and *Yü-hai* 玉海 both define the standard *kung* mode with an augmented fourth, however. For this reason, it is preferable to leave open the question of the character of the fourth in the *kung* modes in Tuan's table. (Some of Shên Kua's series of pitches for a set of four related modes (*kung*, *shang*, *chiao* and *yü*) include both perfect and augmented fourths, apparently unused).

Gimm (p. 551) refers to a remark by Chiang K'uei concerning the disuse of the *chih* modes, and suggests (as did Courant) that it was the close relationship between modes that started on the fundamental and on the fifth above it which led to the latter being avoided. Courant pointed out, more explicitly, that the three principal degrees of such a pair of modes are identical notes, though the sequence of these differs in the two modes, and he therefore describes the pair as 'analogous' modes. Chiang K'uei gets to the root of the matter when, in the preface to his '*Shao* in the *chih* mode' (Picken, *loc. cit.*, 1966) he shows in detail how the *chih* mode is ambiguous, and that it is difficult to prevent a tune in the *chih* mode from turning into one in the *kung* mode. Chiang K'uei suggests a compromise solution and illustrates it in this tune.

The heading to Tuan's table implies the generation of twenty-eight modes (strictly, of modes and transposed modes) by cyclical transposition. The number 7 (the seven 運), extracted from twenty-eight through division by four (four different basic modes), indicates a 7-note sequence of key-notes, itself constituting a heptatonic scale or scales, that is, a 7-membered cycle. The fact that Tuan mentions only the five *yin* 音 does not mean that the auxiliaries (*pien* 變) are to be omitted from the cycle. There can be no question that Chinese modes had, in theory, been 7-note modes for at least three centuries before his time. The names in the lists under the headings for each of the four modes are (with certain exceptions) unambiguous names, discriminating the 4×7 modes-and-transposed-modes.

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

It is reasonable to suppose that the four lists of *yün* 運—note the re-appearance of the image of a 'turn', related to that of 'wheel' or 'cycle'—represent successive shifts of the modal initial along a diatonic, heptatonic series. The underlying reason for the reduction of the complete theoretical system of 84 modes-and-transposed-modes (7 x 12) to 28 was precisely that, on a flute for example, inversion of a diatonic, heptatonic series will yield three or four modes conveniently within the range of one flute. Accepting that the series of initial notes corresponding to the sets of *yün* are diatonic series, it is not immediately obvious what this diatonic series is for each set of modes.

There exists, however, an important property of the series, namely, that it is composed of steps of tones and semi-tones—in Chinese terms, steps of one *lü* (S) and two *lü* (T)—in patterns differing for the different modes. For the basic lydian Chinese series, C D E F♯ G A B, the pattern is T T T S T T S, for example. Setting out Tuan's lists side by side, but in the sequence of the initials of the basic modes, with *kung, shang, chiao* and *yü* lists placed first, second, third and fourth in sequence from left to right, we may then look for singularities in the sequence of names which might correspond to the position of the single *lü* steps from one initial to the next.

Kung	Shang	Chiao	Yü
Chêng kung tiao	*Yüeh tiao*	*Yüeh chiao tiao*	*Chung-lü tiao*
Kao kung tiao	*Ta-shih tiao*	*Ta-shih chiao tiao*	*Chêng-p'ing tiao*
Chung-lü kung	*Kao ta-shih tiao*	*Kao ta-shih chiao tiao*	*Kao p'ing tiao*
Tao-tiao kung	*Shuang tiao*	*Shuang chiao tiao*	*Hsien-lü tiao*
Nan-lü kung	*Hsiao-shih tiao*	*Hsiao-shih chiao tiao*	*Huang-chung tiao*
Hsien-lü kung	*Hsieh-chih tiao*	*Hsieh-chih chiao tiao*	*Pan-shê tiao*
Huang-chung kung	*Lin-chung tiao*	*Lin-chung chiao tiao*	*Kao pan-shê tiao*

Among these names, certain pairs in which the second member is qualified by *kao* 高 'high' stand out. We may tentatively suppose these to be one-*lü* steps in the cycle of *yün*.

The placing of one semitone-step does not, unfortunately, determine automatically that of the second step in the seven-membered

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

cycle, in the absence of further information. Looking at the *yü* list, however, it is seen that the sixth mode in the basic position: *pan-shê tiao* [1]), is the sixth *yün* in the list of modes of the sixth (*yü* modes). We have therefore located the *yü* mode that begins on the sixth degree of the basic heptatonic series. If, for convenience and ease of comparison, we suppose that *chêng kung tiao* (the basic heptatonic series) starts on C, that mode can be represented as © D E F♯ G A B. Then *pan-shê tiao* is C D E F♯ G Ⓐ B, with A, the sixth degree, as initial [2]).

If the *pan-shê* mode is in its correct sixth place in relation to the *chêng kung* mode, the same is perhaps true of related modes in the *shang* and *chiao* columns. If the *yüeh* mode begins on C, for example, the *yüeh chiao* mode should begin on D, since the step between the second degree (on which the *shang* mode begins) and the third degree (on which the *chiao* mode begins) is a tone.

As set out by Tuan, however, corresponding *shang* and *chiao* modes are opposite each other, at the same level in the two lists. This cannot be correct. If *lin-chung chiao* is transferred to the head of the *chiao* list, however, the expected sequence emerges:

Yüeh tiao	*Lin-chung chiao tiao*
Ta-shih tiao	*Yüeh chiao tiao*
Kao ta-shih tiao	*Ta-shih chiao tiao*
Shuang tiao	*Kao ta-shih chiao tiao*
Hsiao-shih tiao	*Shuang chiao tiao*
Hsieh-chih tiao	*Hsiao-shih chiao tiao*
Lin-chung tiao	*Hsieh-chih chiao tiao*

In these two lists, therefore, there must be steps of a tone between the initial notes of corresponding *shang* and *chiao* modes: between *yüeh tiao* and *yüeh chiao tiao*, for example, and so on. If we now mark a conjectural semitone-step (S) between *ta-shih chiao tiao* and *kao ta-shih chiao tiao*, we can complete the heptatonic series of *yün* for the *chiao* set by marking tone-steps between all the other *chiao*

[1]) The statement that *pan-shê* corresponds to the sixth degree of the Chinese heptatonic series, that is to *yü*, occurs in the *Sui Shu* ch. 14: 'The sixth is called *pan-shan*; in Chinese, the fifth note [of the pentatonic series], that is, the *yü* note.' 六曰般贍華言五聲卽羽聲也 (贍＝涉).

[2]) Modal series here and elsewhere in this review are shown within the range of a single octave in order to display the shifts in position of the modal initials as they are transposed round the cycle. The series should be read from left to right, starting at the ringed initial, continuing to the right-hand end of the series, and then beginning at the left-hand end and continuing until the initial is reached again.

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

modes. For where the step between corresponding *shang* and *chiao* modes is a tone (as established above), the steps between the initials of the *chiao* modes must also be tones:

Lin-chung chiao tiao
T
Yüeh chiao tiao
T
Ta-shih chiao tiao
S
Kao ta-shih chiao tiao
T
Shuang chiao tiao
T
Hsiao-shih chiao tiao
T
Hsieh-chih chiao tiao

This result places the missing semitone-step of necessity between *hsieh-chih chiao tiao* and *lin-chung chiao tiao*, so as to complete the pattern: T T S T T T S.

Turning to the list of *shang* modes, the steps can be reconstructed in the light of the *chiao* pattern as follows:

Yüeh tiao
T
Ta-shih tiao
S
Kao ta-shih tiao
T
Shuang tiao
T
Hsiao-shih tiao
T
Hsieh-chih tiao
S
Lin-chung tiao

Setting out side-by-side the patterns established for steps between *yün* for *shang* and *chiao* modes: T S T T T S T and T T S T T T S respectively, and remembering that the initials of the *kung* modes must lie one tone below the initials of the corresponding *shang* modes, we can reconstruct the pattern for the *kung* modes as S T T T S T T. Applying this to the series of *yün* for the *kung* modes, the semitones fall between *chêng kung tiao* and *kao kung tiao* (as anticipated) and between *nan-lü kung* and *hsien-lü kung*.

Turning to the *yü* modes, and remembering that the initial of the

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

pan-shê tiao must be shifted six places along the *yü* series of *yün* as compared with the *kung* series of *yün*, we begin writing down the *kung* pattern (STTTSTT) starting in the sixth place with S: . . . . . ST, and then completing the anterior portion of the series, so as to complete the cycle: T T S T T S T. The semitones fall between *pan-shê tiao* and *kao pan-shê tiao* (as anticipated) and between *kao p'ing tiao* and *hsien-lü tiao*.

It will have been noticed that, while the presence of a semitone between the modal initials of *ta-shih chiao tiao* and *kao ta-shih chiao tiao* was postulated in reconstructing the steps between *yün* in the series of *chiao* modes, further moves in this reconstruction have not depended on postulates of this kind, yet one of the semitone steps in each of the reconstructed series has each time been located before a modal name qualified by *kao*. Furthermore, comparing the *kung* and *yü* lists, the two pairs of recognisably corresponding modes: *huang-chung kung* and *huang-chung tiao*, *hsien-lü kung* and *hsien-lü tiao*, are in their correct relative positions to each other, the *kung* mode in either case lying six places higher up the *yün* series. This internal consistency of the entire reconstruction argues the correctness of the initial postulate.

With the information so gained we can reconstruct the twenty-eight modes-and-transposed-modes themselves, starting from C as fundamentals, see p. 25.

Of the lists of modal names given by Tuan, those for *kung*, *shang* and *chiao* modes correspond exactly with those given by Shên Kua (*Pu pi-t'an*, ch. 1), even though the latter is writing, as he expressly states, of the *yen-yüeh* of his own time (*chin yen-yüeh* 今燕樂); but Shên Kua's list of *yü* modes mistakenly places *chêng p'ing tiao* immediately after *kao pan-shê tiao*. In the *Sung Shih* (志 ch. 95), the lists of names follow different sequences. Briefly, they are arranged so that the initial notes of the modes in the first *yün* of each set preserve the correct relationship to the fundamental, for example: *kung* : *shang* : *chiao* : *yü*: : Ⓒ : Ⓓ : Ⓔ : Ⓐ. Each list of *yün* then exhibits the same sequence of tones and semitones, namely: S T T T S T T. This sequence is that for the *kung* modes in Tuan's table. The sequence itself is none other than the auxiliary *pien-kung* modal series. The reason for choosing this rather than the basic *kung* (lydian) series was, presumably, that keys requiring sharpening of more than 4 degrees would result from the latter choice, both among *kung* and *shang* modes. Tuan's sets of modes include in each set only one mode in a key of as many as four sharps.

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

Kung *)							
Chêng kung tiao	Ⓒ	D	E	F♯	G	A	B
Kao kung tiao	CⒸ♯	D♯		F	G G♯	A♯	
Chung-lü kung	C	DⒹ♯		F	G	A A♯	
Tao-tiao kung	C	D	E	Ⓕ	G	A	B
Nan-lü kung	C♯	D	E	F♯	Ⓖ	A	B
Hsien-lü kung	C	DD♯		F	GⒼ♯	A♯	
Huang-chung kung	C	D	E	F	G	AⒶ♯	

Shang							
Yüeh tiao	Ⓒ	D	E	F	G	A A♯	
Ta-shih tiao	C	Ⓓ	E	F♯	G	A	B
Kao ta-shih tiao	CC♯	Ⓓ♯		F	GG♯	A♯	
Shuang tiao	C	D D♯		Ⓕ	G	A A♯	
Hsiao-shih tiao	C	D	E	F	Ⓖ	A	B
Hsieh-chih tiao	C♯	D	E	F♯	G	Ⓐ	B
Lin-chung tiao	C	DD♯		F	GG♯	Ⓐ♯	

Chiao							
Lin-chung chiao	Ⓒ	DD♯	E	F	GG♯	A♯	
Yüeh chiao	C	Ⓓ	E	F	G	AA♯	
Ta-shih chiao	C	D	Ⓔ	F♯	G	A	B
Kao ta-shih chiao	CC♯	D♯		Ⓕ	GG♯	A♯	
Shuang chiao	C	DD♯		F	Ⓖ	AA♯	
Hsiao-shih chiao	C	D	E	F	G	Ⓐ	B
Hsieh-chih chiao	C♯	D	E	F♯	G	A	Ⓑ

Yü							
Chung-lü tiao	Ⓒ	DD♯		F	G	AA♯	
Chêng p'ing tiao	C	Ⓓ	E	F	G	A	B
Kao p'ing tiao	C♯	D	Ⓔ	F♯	G	A	B
Hsien-lü tiao	C	DD♯		Ⓕ	GG♯	A♯	B
Huang-chung tiao	C	D	E	F	Ⓖ	AA♯	
Pan-shê tiao	C	D	E	F♯	G	Ⓐ	
Kao pan-shê tiao	CC♯	D ♯		F	GG♯	Ⓐ♯	

*) It has been assumed that the 7-note *kung* mode was a lydian series; but the fourth was probably perfect in some types of music (p. 94).

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

The reason for devoting so much space to the discussion of this table is that it gives so much information about the T'ang modes, information previously only available in the light of later texts. Dr Gimm's reconstruction—pp. 552-554—does not show the 7-note character of the modes, and in one instance his reconstruction of a 5-note *yü* mode is wrong. This is the *kao p'ing tiao* which should be *e g a h d'*, in his notation. There is a further slip in describing the *yü* mode as 'aeolian'; the note-series of the *yü* mode is dorian. If, for example, the basic *kung* series is C D E F♯ G A B, the *yü* mode starts on A, and the *yü* series is A B C D E F♯ G. This is not a Church aeolian series, but a Church dorian series. The aeolian series would have F♮ instead of F♯. In consequence of this slip, the rest of the classification is also incorrect in its comparison of Chinese and Church modal series. Properly, comparison can only be made for the modes in their 7-note forms. In this guise, *kung* is a lydian series; *shang*, mixo-lydian; *chiao*, aeolian; *yü*, dorian. It is always necessary to bear in mind that this comparison relates only to the note-series; it does not imply, for example, that Chinese tunes in the *yü* mode were like medieval ecclesiastical tunes in the dorian mode in any respect other than that they used the same set of notes.

Since Dr Gimm refers to the questionable validity of the modes as reconstructed in his version of Tuan's table, it is excusable to stress again the importance of the reconstruction offered here and based exclusively on information contained in the table itself, together with certain facts established from earlier rather than later texts. The table is, in a sense, a frozen epitome of the music of the T'ang, and its twenty-eight modes-and-transposed-modes enable us to infer something of the range of musical affect, that is to say, of mood in music, as practised at the T'ang court in the ninth century.

The story of *An-kung tzŭ* 安公子 (Gimm, pp. 472-475), set in the Sui Dynasty, illustrates both the traditional interpretation of modal properties in symbolic terms, and the kind of formal recognition of the functions of various degrees of the modes, which existed in Chinese musical theory. As the author points out, the conception of relationships between the degrees of the pentatonic scale in terms of an administrative hierarchy occurs already in the *Li Chi* (*Yüeh Chi*, ch. 19); but echoes of this kind of assessment of melodic propriety occur as late even as Chiang K'uei, for example, who tested his own attempt to compose a melody in the neglected *chih* mode by the same criteria, and concluded that the hierarchical relationships between the degrees in his tune were as they should be (Picken,

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

op. cit., 1966). Dr Gimm suggests that failure to use the initial (*kung*) after the beginning of the song may have provoked the nefast impression reported. What was important, however, was that this note should return at appropriate places: at the ends of musical lines or at the end of the song itself. It is easy for the mode to change in a Chinese tune without any modulation involving accidentals having occured. If a tune in the pentatonic *kung* mode, for example: C D E G A, starting on C, should come to rest (at the ends of lines) on A and D, for instance, all sense of C being the final would soon be lost.

VII. Instruments

Much interesting information relating to musical instruments and their uses is contained in the *Yftl.* To aid quick finding of the relevant passages, comments will be grouped here according to the Sachs-Hornbostel classification of instruments already (and commendably) adopted by Dr Gimm.

A. *Idiophones*

Iron concussion plaques (111.12) (*t'ieh p'ai-pan* 鐵 | |), probably paired, are briefly mentioned (Gimm, pp. 273, 303). Apart from this reference, only two others are known in Chinese literature, both relating to foreign orchestras (see Gimm, p. 303). Chimes of percussion plaques of iron (111.222), *fang-hsiang* 方響, are frequently mentioned, and representations occur from the middle of the fifth century onwards; but the origin of this instrument is unknown (Gimm, pp. 564, 565).

The meaning of the story of the *fang-hsiang* that could not be 'matched with all the modes' (*pu ying chu tiao* 不應諸調) (Gimm, p. 565) is far from clear. Since a single carefully tuned *fang-hsiang*-plaque (kept by T'ang T'ai-tsung in his treasury) would be of little practical use, it is possible that part of the text has been lost at this point. The sense may have been, that the Emperor kept a *fang-hsiang*, the first plaque of which was tuned to the fundamental of the first *yün* below the *chung-lü tiao* (p. 98). The name of this note is stated: *ta-lu* 大呂, as is the fact that it is the fundamental of the *kao pan-shê tiao* *).

Why the pitch of this plaque is not defined by the *lü* name only is obscure. A possible reason may be that the series of notes defined

*) The fundamental (*t'ou* 頭) is the initial of the *kung* mode of which *kao pan-shê tiao* is the mode starting on the sixth degree.

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

by the name *chung-lü tiao* is in some way relevant. Conceivably, at the time when the *Hu-pu* was established, the *fang-hsiang* plaques were not tuned (as stated in the Sung *Yüeh Shu*—Gimm, p. 565) with a complete chromatic octave over the lower part of the range. The term *chih-pa shêng* 直拨 | "gerade durchgehende Töne" may have been applied to a 'straight' heptatonic series starting on the fundamental of the *chung-lü tiao, chia-chung* 夾 | (*e*♭ if *huang-chung* is *c*), namely: *e*♭ *f g a b*♭ *c d* . . ., rather than a zigzag chromatic series: *e*♭ *e*♮ *f g*♭ *g*♮ *a*♭ *a*♮ *b*♭ *b*♮ *c d*♭ *d*♮ . . . Such an instrument could not be matched with all the modes.

If, however, the Emperor owned a *fang-hsiang* starting on *d*♭ (*ta-lü*) and tuned to *d*♭ *e*♭ *f g a*♭ *b*♭ *c*. . ., this instrument together with the normal *Hu-pu fang-hsiang* starting on *e*♭ would lack only three out of the total of 12 *lü* necessary for playing in all the twenty-eight modes: *d*♭ (*d*♮) *e*♭ *o f o g a*♭ *a*♮ *b*♭ o *c d*♭ *d*♮ . . .

This still leaves unexplained why Tuan chooses to define *ta-lü* as the fundamental of the *kao pan-shê tiao*. Perhaps the names of the *lü* were so rarely used by the late T'ang that there was some danger of their not being understood, whereas musicians were familiar with the absolute pitches defined by these two common *yü* modes, *chung-lü* and *kao pan-shê* (p. 98).

The naming of the *t'ou* of *kao pan-shê tiao* as *ta-lü* (the second *lü* in the ascending series of 12) is of great interest. It implies that the structure of the heptatonic modes was still thought of in terms of the relationship between the initial (in this case *a*♯ ≡ *b*♭) and the fundamental of the corresponding *kung* mode (*c*♯ ≡ *d*♭). The fact that apparent *kung* series—*e*♭ *f g a b*♭ *c d* . . . and *d*♭ *e*♭ *f g a*♭ *b*♭ *c* . . .—were interpreted as *yü* (dorian) series means perhaps that the usual final of pieces making use of the *fang-hsiang* was *c* (or *b*♭). This conclusion suggests that the *fang-hsiang* was a foreign instrument. The basic (and commonest) Chinese mode has always been the *kung* mode.

With so much evidence of contact with Central Asian peoples, it is not surprising that idiophones typical of Central Asian usage are mentioned: cymbals (111.142) (*chin* 金) in association with a dance from the site of modern Tashkent (Gimm, p. 261), and copper gongs (111.241) (*t'ung p'o* 銅鈸), perhaps from Samarkand. The reference to a percussion earthenware vessel (111.242.11) (*fou* 缶) (Gimm, p. 449) is the more striking in that the musical use of such vessels is already recorded in the *Shuo Wên* 說文. The author's translation of *chung* 鐘 as 'Glockengong' (Gimm, p. 109) is unsuitable. The *chung*

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

is a bell (111.242.121), even though clapperless. As in all bells (as opposed to gongs) vibration is least at the vertex and greatest at the mouth. The story of an Imperial request that a piece be composed with the title 'Carriage bells in a downpour' (*Yü-lin ling* 雨霖鈴) (Gimm, pp. 483, 485) also illustrates the persistence of a name from the *Shuo Wên*, where small clapper bells (*luan ling* 鑾鈴) (111.242.122), eight to a chariot, are defined. The account of twelve fine porcelain bowls (*ou* 甌) (not merely 'Tongefässe'—Gimm, p. 447) tuned as a chime (presumably to the *lü-lü*) by partly filling with water, and played with rods of wood or metal, establishes the use of a 'resting-bell' chime (111.242.11). The author mentions the use of this type of chime in India as *jaltarang*; it occurs also in Ceylon and is said to be mentioned in a Sanskrit work of *ca* 700 (C. R. Day: *The music and musical instruments of Southern India and the Deccan*, 1891, p. 105). In India it is played with felt- or cork-covered beaters, or rubbed like the European glass-harmonica. The device now has a wide distribution and is to be found, in unsophisticated form, in rural Anatolia, for example. Another idiophone that spans Asia is the staff with metal ring-jingles (112.112) (used as a stamping stick?) mentioned in the *Yüeh Shu* account of the *P'o-lo-mên* dancers (p. 78) (Gimm, p. 295). In Istanbul such staffs were used by street-nightwatchmen (*bekçi*) until the nineteenth century.

B. *Membranophones*

The great variety of drums that figure in accounts of the court music of the T'ang period has long been known, but details of construction are unfortunately lacking. The earliest Chinese drums—of which at least one bronze model survives from the Shang period (Li Ch'un-i 李純一, *Chung-kuo ku-tai yin-yüeh shih kao* 中國古代音樂史稿, Yin-yüeh ch'u-pan-shê, Peking, 1958)—were nail-braced; but many of those in use in the T'ang period were cord- or thong-braced, and in some the bracing was under tension from a central ligature or from sliding toggles. Dr Gimm argues that Tuan's name: *ta-ku* 答鼓 for a waisted, braced, Central Asian drum, is an abbreviated form of *ta-la-ku* 答臘 | , and that, in view of the ancient pronunciation of *tập-lâp* (Karlgren, *Grammata Serica recensa*, 676 a/b, 637 j), this name may perhaps be related to Indian *tablā* (Gimm, p. 177). The *tan kuei-t'ou ku* 單龜頭 | (Gimm, p. 301) is perhaps not a 'simple' tortoise-headed drum, but a 'single' (headed) drum. The *hsien-t'ao* 絃鼗 (Gimm, pp. 305, 325), will be discussed later (p. 108); if it existed as a drum, there are no grounds for

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

supposing that it was a plucked drum (as Dr Gimm suggests) like the northern Indian *ânanda lahari* or *gôpî yantra*. The *t'ao* was complete in itself as a rattle drum (212) beaten, on rotating the handle of the drum, by pellets attached to a pair of strings. There is no direct evolutionary line from rattle drum to plucked drum (22).

Concerning the sounds of drums, the author equates the onomatopoeic expression *k'an-k'an* 坎坎 with 'dröhnend' (Gimm, p. 462); but compared with some of the onomatopoeic words for drum sounds in the *Shuo Wên*, *k'an-k'an* is not threatening. More awe-inspiring examples are *b'vng* 彭 and *d'uong* 鼓, for example. *K'an-k'an* cannot compare with these in conveying menace; rather it suggests, perhaps, a briskly moving, relatively high-pitched, drum beat.

Two interesting points concerning drumming-technique emerge from Tuan's text (Gimm, p. 458); both concern Prince Hua-nu who, while playing the spool-shaped (projecting disks), strap-braced, deer-skin drum (*chieh-ku* 羯鼓) (211.248), kept his head and neck so still that mallow flowers, stuck in his silk hat by the Emperor T'ang Ming-huang himself, did not fall out. He was also able to use three beaters (*chang* 杖) simultaneously and 'never missed a beat'.

The simplicity of the principle rhythmic schemes for *ta-ch'ü* movements, tentatively reconstructed in the table on p. 84, does not imply that the drumming technique was rudimentary. These schemes are merely the gross structures, analogous to the main rhythms (*tāla*) of Indian music. There is reason to suppose they would be decorated (as are drum patterns in *gagaku*) and even, perhaps, with something of the skill to be experienced today in Indian and Middle Eastern drumming.

C. *Chordophones*

a. Zithers

The instrumentaria of East Asian musical cultures differ from all others in the importance attached to zithers (whole-tube or half-tube zithers; 312.1 and 312.2) derived immediately from the intrinsic structure and natural properties of bamboo. In areas of high East Asian culture, such zithers have all been translated into more robust wooden forms, but they retain constructional links with more primitive types. In attempting to establish a relative chronology for Chinese zithers, it is important to remember that the persistence of the name of an instrument does not signify that the instrument itself has remain unchanged. The *ch'in* 琴 as known

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

today, for example, cannot be traced back before the third century. What precisely the *ch'in* and *sê* 瑟 mentioned in the *Shih Ching* were, is not known. This much needs to be said as background to the description of the *chêng* 箏 (Gimm, p. 412) as a 'volkstümliche Sonderentwicklung' of the *ch'in*.

The *ch'in* as it exists today, as it was in Chin 晋 times (see Hsi K'ang 嵇康, *Ch'in fu* 琴賦) (p. 111), and even—from iconographical evidence—as it was in Han times, differed from *sê* and *chêng* in at least one important respect: it lacked moveable bridges. The most primitive surviving folk zithers of East Asia, however, are bamboo tube-zithers with 'strings' consisting of narrow strips of the cortex, attached at each end to a node, and tensioned by small moveable bridges—blocks of bamboo wood—placed under each end of the string. The length between the bridges is one factor determining the pitch of such a 'string'. It can be argued therefore that the *chêng* is the more primitive of the two instruments (*ch'in* and *chêng*), since it retains moveable bridges. It is likely that the *chêng* was still a relatively primitive instrument as late as the first century, because the *Shuo Wên* defines it as *ku hsien chu shên yüeh yeh* 鼓弦竹身樂也, 'an instrument with a bamboo body and plucked strings'. The *chêng* is not a folk development of the *ch'in*; it is a precursor of the *ch'in* as we know it.

In the conversion of bamboo ancestors of both *chêng* and *ch'in* into more massive wooden instruments, not limited in size by the maximum dimensions of bamboo—a material much inclined to become brittle and to split longitudinally as it dries out—, individual terminal bridges have been replaced by semicircular or arc-like collective bridges. Two are present on the *chêng* and one on the *ch'in*. They are clearly visible in Han representations of zithers, but whether the instrument depicted in any particular scene was called *chêng* or *ch'in* cannot usually be determined. Only perhaps in representations of the attack on Han Wang 韓王 by Nieh Chêng 聶政 can one be certain that the instrument shown is a *ch'in*.

Why the *ch'in* lost one of its collective bridges is not known; but the loss may be connected with the development, between Han and Northern Wei 魏 times, of the type of *ch'in* commonly referred to as *Chung-ni shih* 仲尼式 *). Whatever the reason for this change,

*) Professor Thurston Dart has drawn my attention to the fact that the Chung-ni type has the shape of an attenuated lyre, the surviving bridge simulating the yoke, and the indentation of the shoulders (*hsien-jên chien*

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

it was (mechanically speaking) the resulting nearness of the strings over much of their length to the upper board of the resonator which made possible the application of *p'i-pa* left-hand technique to the *ch'in* (p. 110). On the *chêng* such a development remained impossible because of the distance between string and upper board.

The moveable bridges of the *chêng* provide the simplest possible fine-tuning device. Rather than the *chêng* being a development of the *ch'in* for folk use, it has remained a more 'popular' instrument because it retained features of the most ancient bamboo folk zithers.

A new organological point (Gimm, pp. 340, 567), previously unnoticed, is the use of bird tendons as strings for *chêng* and *p'i-pa*. The *k'un-chi* 鵾雞 is described as a crane-like bird, and presumably the tendons used are the leg tendons, since in a crane these may reach a length of three feet or so. A further new detail is the use of annular plectra by *chêng* players: *lu-ku ˇhao* 鹿骨爪, up to 17.5 cm in length. In T'ang times these had been in use since the Liang Dynasty (502-556). They are not used today by Chinese *chêng* players, but the various forms of Japanese *koto* 箏 are still played with massive annular plectra.

The *ch'in* of today is a heterochord half-tube zither (as is the *chêng*) (312.22). Dr Gimm (p. 79) refers to the *hui* 徽—the studs of mother-of-pearl, ivory, jade, silver or gold, inlaid into the lacquer coat of the curved upper board, parallel to the lowest string—, as 'Griffmarken'. This descriptive term perpetuates a misconception. Only in a very loose sense are the *hui* markers of the points at which the strings are stopped. They mark the acoustic nodes: the half, thirds, fourths, fifths, sixths and eighths of the string length. They enable the player to find the nodes, and therefore to generate harmonics, instantly. They also serve as a rough guide in stopping the strings, but they do not define any scale used by the Chinese. In the *ch'in-p'u*, stopping places are indicated in terms of the serial numbers of the *hui*, counting from the bridge end—in playing, this lies to the player's right—together with any number from zero to 9 of imaginary tenths (*fên* 分) of the distance between two *hui*. Sometimes the stopping place is shown as at a given *hui*; but even then this is only an approximate guide and, on a particular instrument with a particular set of strings, the player is constantly guided by his ear in choosing the exact point at which to stop the string. The

仙人肩), the incurving of the pillars supporting the yoke. Whatever the impetus that led to these changes, the lyre-like features are without functional significance.

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

correct stopping place may be slightly to the left or to the right of the spot indicated in the *p'u*.

The *fan shêng* 泛聲 or *fan yin* | 音 (Gimm, p. 81) are not a kind of *vibrato* but harmonics, produced by lightly stopping an acoustic node at the moment when the string is excited.

Concerning the passage from the *Ch'in fu* by Hsi K'ang (Gimm, p. 79), more important for the proper sounding of the strings than the space between them is the space between string and resonating surface. If the sound is to decay gradually to extinction as a result of internal damping only (*pi* 瘪), the angle the string makes with the upper board must be sufficiently large for vibrations not to be damped by contact with the surface. The second point made in this passage is merely that harmonics can be produced with greater ease the longer the string. 'Since the space is wide, the sounds die away gradually; since the strings are long, the nodes sing out'.

To Dr Gimm's account of the Lei family and their *ch'in* I can add a little from personal experience. At the home of Mr P'ei T'ieh-hsia 裴鐵俠 (Hsüeh-ch'in 雪琴) on the outskirts of Ch'êng-tu 成都, I was privileged, early in 1945, to see his famous pair of *ch'in*, the *Shuang Lei* 雙雷—*Ta Lei* 大 | and *Hsiao Lei* 小 | respectively—and to play *Hsiao Lei*. An imperfect photograph of the two instruments was reproduced in *Chin Yü ch'in k'an* 今虞琴刊 (edited and published by the *Chin Yü ch'in-shê* | | | 社 (1938) (*t'u-hua* 7: *Shuang Lei Chai ts'ang ch'in* | | 齋藏琴). The photograph carries (superimposed in white *li-shu* 隸書) details of the inscriptions on the two instruments, both external and internal.

Below the dragon pool 龍池 (the sound-hole), the bottom-board of the *Ta Lei* bears, in a square cartouche, *ca* 9 x 9 cm, six characters in seal script: 新安汪氏善吾. Engraved on the belly in *k'ai-shu* 楷書 are five characters: 大唐雷霄制. The *Hsiao Lei* carries written in ink inside the belly and on the under surface of the curved upper board: 開元十年西蜀雷氏 . . . . According to the note on the photograph, the continuation of this inscription is indistinct and cannot be deciphered. The date (722) thus falls within the known period of activity of Lei Hsiao himself (Gimm, p. 453). Notwithstanding their names, the *Shuang Lei* are of equal length. Of the two, only the *Hsiao Lei* remained sufficiently robust to be strung. After I had played *Yang-kuan san tieh* (p. 85) on a Sung instrument, Mr P'ei retired to re-appear with the *Shuang Lei*. I then played *P'u-an chou* (p. 79) on the *Hsiao Lei*. Contrary to what is usually experienced on changing to an unfamiliar instrument, *Hsiao Lei* was easier to

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

play, and more rewarding, than the *ch'in* to which I was accustomed. The harmonics (*fan yin*) rang out with extraordinary intensity and purity. The fine, visible hair-cracks in the lacquer (*tuan-wên* 斷文) on both instruments were imperceptible to the finger-tips. The specific patterns of the *tuan-wên*, described as *shê-fu* 蛇腹 (snake-belly) for the *Ta Lei*, and as *liu-shui wên* 流水文 (ripple pattern) on the upper board of the *Hsiao Lei*, suggest instruments about a thousand years old. The lacquer coat is not just a varnish-like finish but a hard, cement-like case to the instrument, some 3 to 5 mm thick. By zither authorities it is generally held to be impossible to tamper with internal inscriptions on the upper board of a zither without re-making the instrument. The condition of the lacquer and the figure of the *tuan-wên* argue against this having occurred.

b. Lutes (321)

The author summarises the history and typology of Chinese lutes (Gimm, pp. 313-317) and provides an excellent bibliography of the subject; but I cannot agree with his conclusions, based largely on those of Kishibe. Regarding the early world-history of lutes, some caution must be exercised in interpreting the objects held by Elamitic pottery figurines of *ca* B.C. 800 as lutes: no strings, pegs, etc. are visible, for example. It is not the case that *p'i-pa* in the sense of musical instrument occurs in the *Shuo Wên* (Gimm, p. 315), *P'i-pa* 枇杷 occurs in the sense of 'tree': ‖ 木也 (ch. 6, f. 2r, 6r), and in the edition by Hsü Hsüan 徐鉉 (986), *p'i-pa* 琵琶 is marked as a recent addition (*hsin fu* 新附). The reference to the *p'i-pa* tree relates, presumably, to *Eriobotrya japonica* Lindl. On the same page, Dr Gimm suggests that the oldest type of *p'i-pa* was the bent-necked type, and that it is to this that the *Fêng-su t'ung* 風俗通 and *Shih ming* 釋名 refer. Nothing in these texts indicates that they relate to such an instrument, however, and in the other early source, the fragments of the *P'i-pa fu* ‖ 賦 by Fu Hsüan 傅玄, neither the shape of the body, nor the number of frets, is reconcilable with the bent-necked type. Furthermore there appears to be no iconographical evidence for the existence of the bent-necked type in China as early as the third century; nor is there evidence that any Chinese lute ever had a curved (bombé) resonating table. Furthermore, according to *Shih ming* and *P'i-pa fu* there were four strings on the contemporary *p'i-pa*, not five.

The earliest iconographical evidence of the presence of lutes in China known to me is: (1) a late Han tomb-painting of a pyriform

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

short-necked lute with a straight neck and *ca* 8 tuning pegs, laterally inserted; (2) a fretted long-necked lute with four strings, bridge, circular table with two sound-holes, the whole modelled in the round, played by a figure on the lid of a blue-glazed grain-jar of the mid-third century (*Chung-kuo yin-yüeh-shih ts'an-k'ao t'u-p'ien*, Series 8, 1959).

Again, it is surely significant that not a single *p'i-pa* player of the Han Dynasty is mentioned in the *P'i-pa lu* (Gimm, p. 306); the earliest names are all of persons living in the Chin period.

Thus the earliest textual references, the earliest iconographical evidence, and the earliest reported names of performers all date from late Han or Chin times. This being so, it is surely necessary to be cautious in accepting later accounts of *p'i-pa* history, and in particular that of the *T'ung tien*, at face value, as Kishibe has done.

Regarding the *hsien t'ao* story (Gimm, pp. 305, 325), I have in the past argued (Picken: "The origin of the short lute", in *The Galpin Society Journal*, 8, pp. 32-42, 1955) that this never existed, that it was merely a hypothetical 'strung rattle-drum' (212). It is possible, however, that a simple lute was made, using (for cheapness) a resonator constructed like a small, two-headed, shallow cylindrical drum. Single-headed frame drums are sometimes used for making simple lutes in villages in Eastern Anatolia today. The modern *san hsien* 三絃 has just this construction, except that its body is not a cylindrical, but a rectangular, two-headed, snake-skin-covered drum.

Among existing Chinese lutes there can be no doubt that the *san hsien*, notwithstanding its lack of a documented history, retains more primitive features than any other: it is a long-necked lute without frets, strung with three strings only, played with a sizeable plectrum and, like ancient lutes, it retains a skin table. These are all features shared with primitive long-necked lutes of Central Asia today. Moreover, like the Hittite, Hurrian and Egyptian (post-Hyksos) lutes of the second millenium B.C., the *san hsien* is a type of spike-lute, unlike any other lute known to the Chinese. Although the first appearance of the name *san hsien* seems to be that in the *Yüan Shih* 元史, the instrument itself may well be the most ancient of Chinese lutes. Conceivably it remained unmentioned by earlier texts because (a) it was a folk instrument and borrowed from Central Asia, (b) because by Chin times it had been ousted by the more expensive and more sophisticated fretted lutes with larger (and therefore more sonorous) carved bodies and with four strings.

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

Conceivably the *shê-p'i p'i-pa* 蛇皮 | | (Gimm, p. 301) may have been the ancestor of what is known today as *san hsien*, since the use of a snake-skin membrane as table on the *san hsien* is a diagnostic character of the instrument.

While 5-stringed pyriform lutes figure in Tun-huang frescoes, it is worth noting that the *wu hsien* 五絃, represented in the twelfth century Japanese scroll *Shinzeikogakuzu* 信西古樂圖 (Yin-yüeh ch'u-pan-shê, 1958), has a large circular table with two sound-holes, a narrow neck with backwardly-bent peg-box and (apparently) no frets. Like the *p'i-pa* in the same scroll, it is played with a large plectrum.

Concerning the typical, bent-necked, pyriform *p'i-pa*, several structural points call for comment. First, it is untrue that the upper frets (*hsiang* 相) are moveable (Gimm, p. 372). Secondly, the statement that strings were made of sheep-gut (*yang p'i* 羊皮) is of interest, since in recent times *p'i-pa* strings have always been made from silk-gut. The use of sheep-gut for strings is general throughout Central Asia and extended, until comparatively recently, into Anatolia. Dr Gimm suggests that sheep-*skin* may also have been used (Gimm, pp. 367, 368); this has not been seen on Asian lutes, but African lutes (which preserve very ancient features) are strung at times with strings of twisted thongs of skin, still bearing the hair.

There can be no question that bent-necked lutes were developed for reasons of mechanical convenience (Gimm, p. 323). Among the parallel passages from different editions of the *Yftl* relating to this point, that from what Dr Gimm refers to as the 'large *Shuo Fu*' is surely the most satisfactory: 蓋便于關軸也. Recalling the expression for tuning the *chêng* by moving the bridges: *huan chu* 換柱, and remembering that *kuan* 關 can also be read as *wan* (in archery) in the sense of bending a bow by tightening the string, the parallel expression: *wan chu* 關軸 might mean turning the pegs—which tightens or slackens the strings. The whole sentence might be read: 'The latter [the bent neck] is convenient for turning the pegs'. It is convenient because the pegs are brought within closer reach, and because the shorter-necked instrument is better balanced than one with a long neck, since its centre of gravity falls within the body.

The discarding of the large plectrum between 627 and 649 (Gimm, pp. 306) is of great interest. It indicates a change away from the style of playing characteristic of the *biwa* in *gagaku* today, where all strings may be sounded simultaneously by the plectrum, one string being fingered, so that the tune is delivered against a complex drone

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

of open strings. The new style was evidently a more highly differentiated linear style, making use of a variety of different timbres, achieved by varied methods of plucking and stopping the strings (see below).

The stories of Ts'ao Kang 曹鋼 and Hsing-nu 興奴 (Gimm, pp. 309, 380, 381) are apposite: 'Ts'ao, expertly handling the plectrum like wind and rain, made no use of finger-plucked strings.' The sound was like a storm because of the powerful blows of the large plectrum (incident over substantial lengths of the strings) and the maximal sonority of the open-string drones. He was the 'right-handed one', because he used the plectrum in the right hand, while Hsing-nu was the 'left-handed one', presumably because of her skillful fingering of all the strings with the left hand, and her use of the left hand in such characteristic effects as *yen* (p. 113).

An interesting correlation not previously noted is that of rain-magic and *p'i-pa* (Gimm, pp. 372, 380, 396).

In a note of some importance (Gimm, p. 346), the author examines the interpretation of signs such as *lung* 攏, *nien* 撚 and *yen* 罨, mentioned in a passage (from the *Yftl* text in the *Shuo Fu*) relating to a particularly fine *p'i-pa*, and he concludes that it is now probably impossible to determine their meaning. This is perhaps too pessimistic a conclusion. He shows that some of these terms (or graphic variants) were still current in nineteenth-century *p'i-pa* technique. They are in fact still in use today (see the summary account in *Min-tsu yüeh-tui yüeh-ch'i fa* 民族乐队乐器法, ed. Chung-yang yin-yüeh hsüeh-yüan, published by the Yin-yüeh ch'u-pan-shê, Peking, 1962, pp. 34 to 47). Many of these terms are also used, though in abbreviated form, in the construction of tablatures for the *ch'in*. There use is well-documented from Sung times onwards.

While the vocabulary of finger-movements for the *chêng* is relatively small: nine for right-hand movements; four for left hand movements, the *p'i-pa* today has a vocabulary of nineteen terms for right-hand movements and seventeen for left-hand movements. Seven of the *chêng* terms occur also in the *p'i-pa* vocabulary and six of these are right-hand movements. Virtually all these terms appear in the *ch'in* vocabulary and there is evidence of progressive expansion of the *ch'in* vocabulary, at least between Sung and Ming times. Thus Chiang K'uei's *ch'in* tablature (1202) employs abbreviations of eight different right-hand terms and five left-hand terms; the *Shih-lin kuang-chi*, in the article *ch'in* in the *Wên-i lei*, lists twenty-two right hand terms and twenty left-hand terms; the

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

facsimile edition of the *Shên-ch'i pi-p'u* 神奇秘譜 (1425), published by the Yin-yüeh ch'u-pan-shê (1956), lists forty-nine right-hand signs and fifty-one left-hand signs.

These data alone suffice to demonstrate how much more complex *ch'in* technique is than *chêng* technique. The reason for including them here is that it seems likely that *ch'in* technique was transformed under the impact of the *p'i-pa*. The presence of the same right-hand terms in both *chêng* and *ch'in* lists suggests that their techniques were originally similar. These right-hand terms cannot have been borrowed from *p'i-pa* players because at first the *p'i-pa* used the plectrum. On the other hand, the fact that *ch'in* right-hand terms are used by *p'i-pa* players may mean that the discarding of the plectrum—which seems to have occurred in China centuries before it did so in countries to the west—took place under the influence of *ch'in* technique.

The suggestion is then that the *ch'in* players borrowed left-hand movements (and a few characteristic right-hand movements) from *p'i-pa* players, while *p'i-pa* players borrowed terms for right-hand movements from *ch'in* players when they abandoned the plectrum. Whatever the explanation, virtually all the *p'i-pa* terms can be found in the *ch'in* vocabulary. The question may be asked: what evidence is there that the *ch'in* technique was once as limited as that of the *chêng*? There are three types of evidence: (1) the frequent representations of the *ch'in* being played as it rests on the thighs of the performer, sitting cross-legged, or in Han times inclined across one thigh. In this position it is impossible to play pieces employing finger-techniques of the Ming period; the wrist/forearm angle is inappropriate, and many of the stopped sounds are too faint to be heard. On the other hand, open-string sounds and harmonics are adequate even for performance in the open air. *Ch'in* iconography constantly represents performers with the *ch'in* across their knees, suggesting that this is an old tradition. The commonest gesture depicted shows the hands in the position assumed by the performer who has just excited a harmonic. (2) As the late Robert van Gulik pointed out in his *Lore of the Chinese Lute* (1940), p. 185, it was common for *ch'in* of pre-T'ang date to be decorated with gold and silver inlay. Such a surface would not be sufficiently smooth for the execution of the finger-movements practised in Sung and later times. (3) The *Ch'in fu* of Hsi K'ang *) includes only three

*) Dr Gimm reads 'Chi' rather than 'Hsi', but gives no reason for rejecting the express statement in the *Chin Shu* 晉書, quoted by Donald Holzman in *La vie et la pensée de Hi K'ang* (1957), p. 16.

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

brief references to gestures inherent in finger-technique: (a) to plucking fingers in general, not to specific gestures (see R. H. van Gulik, *Hsi K'ang and his poetical essay on the lute*, 1941, p. 53); (b) to harmonics (*op. cit.*, p. 64); (c) perhaps to plucking two strings simultaneously (*op. cit.*, p. 62). Compared with the frequent references to finger-, wrist- and hand-movements in verse descriptive of *p'i-pa* performance, this reticence is suggestive.

Before the advent of the fingered *p'i-pa*, it seems probable, therefore, that the *ch'in* was played largely on open strings, plucked by the right hand, singly or in pairs, with occasional use of the left hand to dampen vibration of the strings at the acoustic nodes (*hui*), in order to generate harmonics—*not* to shorten the strings by stopping.

Of the signs used by Chiang K'uei in his *ch'in-p'u*, *t'iao* 挑, *mo* 抹 and *ch'i* 剔 = 揭 (right-hand movements), and *yen* 奄 (left-hand), also belonged to the *p'i-pa* vocabulary exemplified in the quotations from T'ang texts assembled by Dr Gimm. The non-abbreviated forms can be determined by reference to almost any *ch'in* handbook, and in particular these and other signs are defined in the terms of the earliest *ch'in-p'u* by Yüan Ch'üan-yu 袁荃猷 at the end (下卷) of the edition of the *Shên-ch'i pi-p'u* previously mentioned.

Another term, not used by Chiang K'uei but present in Yüan's list, is *nien* 捻, used for a method of plucking by seizing the string between thumb and first finger, pulling and releasing, so that the string strikes the resonating table 'like a carpenter plucking the inked thread'. This *nien* is similar in significance to *t'i* 提 and *p'ai* 拍 in the modern *p'i-pa* vocabulary in that the sound involves the striking of the lute table on release. This is the only term *nien* in the old *ch'in* vocabulary, and since like *nien* 撚 it means to twist, it is possible that 捻 and 撚 are equivalent homophones.

Missing from the list so far is the most characteristic and conspicuous of *p'i-pa* finger-gestures, used to produce a quasi-sustained note by the repeated striking of a string, using different fingers in sequence. This is *lun* 輪, the 'wheel'. This too is a *ch'in* ornament, present in the tablatures of 1425. Since the other *p'i-pa* terms (or homophones) from T'ang texts all occur in use by *ch'in* players, it would be strange if there were no equivalent in the *ch'in* vocabulary for the term *lung* 攏. I suggest that *lung* is *lun*. My colleague, Dr Paul Kratochvíl, informs me that there are many cases—at least in the synchronous phonological systems of Chinese dialects—where a syllable with the alveolar nasal final [n] in one dialect corresponds

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

to a similar syllable with the velar nasal final [ŋ] in another dialect. In particular, [luən] in Peking corresponds to [luŋ] in T'ai-yüan. According to the 汉語詞典, 攏 represents the syllable *lung*[2] only when it refers to a *p'i-pa* finger-movement. With other meanings, it represents a syllable in the third tone. The fact that 輪 is also in the second tone supports the suggestion; but for proof, evidence from historical phonology is needed.

There is also support, however, from one of Dr Gimm's quotations. The first half of a line from Li Shên 李神 (*fl. ca* 806): 轉腕攏絃 may be interpreted: 'With a twist of the wrist she executes a 'wheel' on the string [striking the string with four (or five) fingers of the right hand in rapid succession]'. The rotational wrist-movement is diagnostic of the *lun* and arresting to the eye. (On the *ch'in*, only three fingers take part, perhaps because of the hand position).

In the light of early *ch'in* usage, we can compile a table provisionally relating early *p'i-pa*-terms for finger movements and *ch'in* terms, for use in the interpretation of quotations such as those noted by Dr Gimm.

Terms in T'ang descriptions of *p'i-pa* technique		Terms from *Shih-lin Kuang-chi* and early *ch'in-p'u*	Meaning of terms from early *ch'in-p'u*
	挑	挑	First finger plucks string outwards. (On *p'i-pa* today, thumb executes this movement towards player's right.)
	抹	抹	First finger of right hand plucks string inwards.
Right hand	揭	剔踢	Middle finger of right hand plucks string outwards.
	撚	捻	First finger and thumb pull and release string to strike table.
	攏	**輪**	Three fingers strike string in succession.
Left hand	掩	奄罨	One finger stops, another percusses.
	抑	抑	Sliding finger excites string.

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

The remark from the *P'i-pa ko* of Yüan Chên (779-831; Gimm, p. 361), that the first slow, unmeasured, instrumental introduction (*san hsü*, p. 83) to the *ta-ch'ü*: *Lu-yao* 錄要, included much use of *lung* and *nien*, is understandable in the light of this table. Precisely in slow movements, the *p'i-pa* makes use of *lun* in the production of quasi-sustained notes. In the transcriptions of *p'i-pa* pieces into staff notation published in *Min-tsu yüeh-ch'i tu-tsou ch'ü hsüan* 民族乐器独奏曲选 (Chung-yang yin-yüeh hsüeh-yüan, Chung-kuo yin-yüeh yen-chiu-suo pien, Yin-yüeh ch'u-pan-shê, 1962, pp. 118-138), prolonged *lun* occur only in slow introductory movements (♩ = 60). Strokes in which the string is made to slap the table occur (1) in slow introductory sections, (2) in the brief interval between successive sections, (3) at points where a sudden *ritardando* occurs or (4) where spaced by rests in faster movements. It will be recalled that Hsing-nu (Gimm, p. 309) excelled in the kind of playing that makes use of *lung* and *nien*.

The term *fu* 撫 from the *Yftl* (see Gimm, p. 348 g) appears not to be a term for a specific movement, but a general term for playing a stringed instrument; it occurs, for example, in 撫琴. There is no evidence from early *ch'in-p'u* that *hui* 揮 was ever used for a kind of *tremolo*, as the author suggests; *hui hsien* 揮絃 too is used as a general term for playing a stringed instrument.

It should be noted, that the sequences of finger-movements in Dr Gimm's quotations are all practicable: to go from *lun* to *mo*; or from *t'iao* to *lun* to *nien* to *mo*, in sequence, is perfectly possible. The musical importance of these references assembled by Dr Gimm is that they show how highly differentiated the finger-technique of later T'ang lutenists was; they show that all fingers of the right hand were employed, and they imply that timbre must have been as diversified as it is on *ch'in* and *p'i-pa* today.

Photographs of the two *hu-lei* (Gimm, p. 396) that appear not to have been seen by Dr Gimm were published in *Chung-kuo yin-yüeh-shih ts'an-k'ao t'u-p'ien*, Series 1 (1954). Most of the inscription on the rear of the peg-box of the *Hsiao hu-lei* can be read but not, unfortunately, the maker's name—owing to the presence of a high-light. It reads: 獻/口口口製恭/建中辛酉春/, set out in two parallel columns, headed by *hsien*, standing alone. The dimensions given are somewhat different from those quoted by Dr Gimm: *Ta hu-lei* 91 cm in length; maximum width 20.8 cm. *Hsiao hu-lei* 47.8 cm in length; maximum width 13 cm. Of neither instrument is it in fact true (as stated) that the strings enter the mouth of the dragon-

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

headed peg-box prior to attachment to the pegs. The strings reach the pegs by passing through channels drilled in the wood of the peg-box, so that their course is invisible. In the case of the *Ta hu-lei* the openings to these channels are sited immediately below the lower lip of the open-jawed dragon head.

c. Bowed lutes (321.71):

I am grateful to Dr Gimm for bringing to light the name of the 'horse-tail' *hu-ch'in* 馬尾胡琴 in Shên Kua, *Mêng-ch'i pi-t'an*, ch. 8 (Gimm, p. 395). This reference, though less informative than that to the *Hsi-ch'in* in the *Yüeh Shu* (Picken: "Early Chinese friction-chordophones", in *The Galpin Society Journal*, 18, pp. 82-89, 1965) is plainly earlier. The fact that it was the bow that was dressed with horse hair is not explicit, but may be fairly inferred; for while horse-hair strings can be excited by a bow—as on the Yugoslav *gusle* or the Mongol *khu'ur*—horse-hair is nowhere used as strings for *plucked* lutes, whether by the fingers or by a plectrum.

d. Harps (322):

There is no evidence that the *k'ung-hou* 空侯 of the *Ch'ien Han Shu* (*pace* Kishibe and Dr Gimm, pp. 415-417) was a harp, or that it was linked with the *k'ung-hou* of later times other than by name. The temptation to look at early texts with the hind-sight of later texts must be resisted, unless there is parallel archeological or iconographical evidence to justify so doing. The passage in the *Ch'ien Han Shu* is concerned with the fabrication of instruments to be employed in ceremonies of prayer and sacrifice to the Great Monad and to the God of Earth in Nan-yüeh. The text harks back to a mythical halving of a probably mythical zither, a *sê* with fifty strings. Such an instrument could have had no practical use and may be related to other legendary stringed instruments, such as the 1,000-stringed *viṇā*. In the circumstances of the forthcoming Spring sacrifices, the text records the command to make '25-strings'. The precise form of the command differs in two different versions of the text. In the one instance it is 'to make 25-strings equal to *k'ung-hou*', in the other 'to make 25-strings and *k'ung-hou*' (*Ch'ien Han Shu*, ch. 25, 上). The report adds: 'The *sê* arose from this'. The only identifiable instrument mentioned here is a zither, and the only origin of an instrument referred to is that of the *sê*.

There is no iconographical evidence as yet to support the view that any kind of harp, whether vertical-angular or arched, was known in

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

China during the Han period. The statements of the *T'ung tien* on which Kishibe bases his case can no more be accepted at their face value for the history of the *k'ung-hou* than they can be for the history of the *p'i-pa*. The *Fêng-su t'ung*, a Han source, does not suggest that the *k'ung-hou* was a harp-like instrument but again links the *k'ung-hou* with a zither, this time a *ch'in*. Kishibe (see Shigeo Kishibe: "The origin of the *k'ung-hou* (Chinese harp)", in *Tōyō ongaku kenkyū*, 1959) translates *i ch'in* 依琴 in the *Fêng-su t'ung* account as 'on the *ch'in*', in the sense of performance of music on an instrument; but the use of *i* 依 by Tu Yu in the *T'ung tien* passage shows that he understood the words *i ch'in* in the sense of a physical likeness: *Chiu shuo i i ch'in chih* 舊說一依琴制 'according to an old report it was first made like a *ch'in*.' The *Shih ming* also, by implication, links *k'ung-hou* and *ch'in*; for according to the *Shi Chi* version of the *Wang kuo chih yin* story (p. 82), Shih Chüan 師涓 copied the *mi-mi chih yüeh* 靡靡之樂 on the *ch'in*.

Dr Gimm's hypothesised 'Harfenlaute' has no basis in any known instruments of East Asia, past or present. The musical bow persists among the aborigines of Taiwan; the monochord harp is to be found as *Đốc huyền cầm* in Vietnam, and the pluriarc survives as *wagon* 和琴 in Japan, but the known early Chinese chordophones were mostly half-tube zithers *) (p. 103).

In the account of the *k'ung-hou yin* ‖ 音 in the *Ch'in ts'ao*, the 'writing' of the melody by Li Yü 麗玉 is presumably again 'copying' (p. 88), since she takes to hand the *ch'in* in order to perform the operation (Gimm, p. 419). In view of the fact that this tune is stated to be one of nine pieces in the *ch'in* repertory, it would again be reasonable to suppose that this particular *k'ung-hou* was a zither.

D. *Aerophones*

a. Free aerophones (41):

Displacement free aerophones (411). The carrying of whips by dancers or guisers is mentioned by Tuan on three occasions (Gimm, pp. 156, 175, 207), and on the first of these, masked performers are taking part in an exorcistic ceremony, the *ch'ü-no* 驅儺. The noise made by cracking hempen whips, several feet in length, is expressly referred to.

*) A single board-zither (314) of the Warring States period was excavated at Ch'ang-sha in 1935 (*Chung-kuo yin-yüeh-shih ts'an-k'ao t'u-p'ien*, Series 1, 1954).

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

East Asia is the centre of origin of the type of interruptive free aerophones (412) known as free-reed mouth-organs (412.132), and the *Yftl* includes a brief section on the *shêng* 笙 (Gimm, pp. 126, 422, 562). Such instruments occur in models of imposing dimensions among certain national minorities in China to this day. To Dr Gimm's example of the tuning of a *hu-lu shêng* 葫蘆 | from a Miao tribe: C D F G b♭ c (Gimm, p. 304), I can add the tuning of a specimen collected from a group of Kweichow Miao: D F G A c d; the former a *shang* modal series, the latter a *yü* series.

b. Wind instruments proper (42):

It seems probable, from the testimony of the scroll *Shinzeikogakuzu* previously referred to (p. 109), that *hsiao* 簫 continued to mean a set of end-blown flutes—a panpipe (421.112)—even in T'ang times. Dr Gimm states that the term *hsiao* had meant a notched vertical flute since Han times, but if the scroll reflects T'ang practice, this was not the only meaning of the term (Gimm, p. 126). On the other hand, the *tung hsiao* 洞 | , described as a kind of panpipe (Gimm, p. 424) is a wide-bored, notched, vertical flute of bamboo, particularly common in South-East China. It is probable that the term *hsiao* was readily transferred to notched flutes with fingerholes, as soon as the principle of making a melodic flute with fingerholes was discovered.

Dr Gimm (p. 427) assembles evidence for a link between the *ti* 笛, the characteristic Chinese side-blown flute (421.121.12), and the Ch'iang 羌, and hence with the Tibetan area. This flute, together with certain Korean flutes, however, is singular in that it is a composite instrument, compounded of tube-kazoo—a tube with a singing membrane applied over a lateral hole—and transverse flute with fingerholes. Tube-kazoos are ancient cultic instruments once widespread (judged by folk survivals) as voice-disguisers throughout Asia. They are still in use in magical ceremonies in South East Africa; and in Anatolia, for example, they persist as toys made by children and as the invariable signal instrument of the shadow-play *Karagöz*. At what date the compound instruments (242 + 421.121.12) first appeared in China is not discussed by Dr Gimm. The earliest explicit description known to me is that in the *Yüeh Shu*, ch. 148, under the heading *ch'i-hsing kuan* 七星管, and somewhat surprisingly in the *su-pu* 俗部. In the accompanying description of the instrument, the covering of a lateral hole with *chu mo* 竹膜 (the thin internal membrane that lines the interior of a node of

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

bamboo) is expressly stated. Also in the *Yüeh Shu*, the description of the *lung-t'ou ti* 龍頭 | , ch. 130, in the *hu-pu*, states that the instrument used by the *Chiao fang* 教坊 of the author's day was a horizontal *ti* with eight holes. This number is that of all recent Chinese transverse flutes and of the Japanese *ryūteki* 龍笛 ; but there is no kazoo membrane on the latter, and it is probable that the *lung-t'ou ti* of the T'ang (unlike that of the Ch'ing) was not a kazoo.

Vessel flutes with fingerholes (421.221.42):

In several places, these are referred to as 'Ocarinas' and classed as flutes with an 'Innenspalte' (Gimm, pp. 118, 127, 547). Ocarinas are indeed vessel flutes with an internal duct, that is to say, they have a recorder, 'Blockflöte'-, or flûte-à-bec-like mouthpiece, but *hsün* 壎 (not *hsüan*) are not. The latter are the more primitive type of vessel flute in which the player blows against the rim of an apical hole. Zoomorphic pottery flutes with internal ducts occur as toys in China, but this type of instrument has never, so far as is known, played a role in adult music there.

Reed pipes (422):

The origin of the word *pi-li* 篳篥 and the history of this instrument are examined at some length (Gimm, pp. 436-439). Notwithstanding the grouping together, by Sachs and Hornbostel, of cylindrical- and conical-bored, double-beating reed-pipes as 'oboes', the difference in acoustic properties between the two types is so considerable that they are better separated; and in order to avoid confusion, it is perhaps preferable to reserve the term 'oboe' for simple, keyless, conical-bored shawms, such as the modern Chinese *suo-na* 鎖吶 and the Turkish *zurna*. The *pi-li* of T'ang times, as contemporary paintings and copies of these show, was a short, cylindrical pipe with a large, double-reed, restrained by an elliptical hoop. This last feature persists on the Japanese *hichiriki* reed today, but the Chinese *kuan-tzŭ* 管子 reed is no longer so controlled.

In approaching the history of these pipes, it is necessary to bear in mind how readily names are transferred from instrument to instrument, even when profound differences exist between them. It is understandable that reed instruments are not always sharply distinguished in folk parlance from natural horns and trumpets. In Turkish dialect use, *boru* is both trumpet and shawm. The two are, indeed, closely related: horns and trumpets rely on the 'double-reed' of the player's vibrating lips for the excitation of the enclosed

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

air-column, while reed instruments are excited by a fabricated double-reed or single-beating reed.

Because of this relationship, it is proper to examine trumpet names in search of the origin of the term *pi-li*. Dr Gimm's list of trumpet names can be extended westwards to include Anatolian *boru* and runs eastwards through the Altaic languages to Manchu *biläri* and on to Korean *pi-ri*.

If we suppose that, notwithstanding the fact that the T'ang *pi-li* was a double-reed cylindrical pipe, the original pre-Chinese *pi-li* was a natural horn, various facts become reconcilable: (1) the frequent appearance of the horn determinant 角 in the earliest form of the element *pi* 觱 (in the *Shuo Wên*, for example); (2) the use of the same term (*pi-li*) for large, leather-covered wooden 'horns' is understandable when we remember that folk trumpets and horns do not suffer the size limitations of pipes with reeds. A large *pi-li* trumpet, 5 feet in length, is perfectly possible—alp-horns and Tibetan *rag duṅ* are very much larger—but a double-beating reed-pipe of this length could not be made from simple natural materials; (3) the name *pi-li* was also given, as the sources show, to horns of conically coiled poplar- or peach-bark. Such bark-horns, with or without double-beating reeds, are almost universal in their distribution. They may be used without reeds as megaphone-like voice-disguisers (cf. the observations of Bertrand Flornoy on the *mayantu* ceremonies of the Iawa people of the Amazon), or fitted with a double-reed and used, particularly in Spring-rites, as finger-hole-less oboes.

The account given by the author of the *Pi-li ko* 篳篥歌 (Gimm, p. 438) is entirely plausible as a history of the *pi-li*. He states that it was made by Western barbarians from a horn. Later a *chia* 笳 was attached as 'head' to a bamboo-pipe. The transition suggests that at a previous stage a *chia* had been attached to a horn. The precise nature of the *chia* (Gimm, p. 154) is not explained in the Chinese sources. In other parts of the world, however, it is usual to distinguish between the pipe and the double-reed that excites it. The reed may be made as a separate entity and sounded as such, as in the practice of village children in Anatolia, where the reed—*zipçik* or *cukcuk*, according to the locality—is a separate instrument from the *boru* of coiled bark in which it is mounted. The *Pi-li ko* implies that the *chia* was a small compact object—since it can be referred to as *t'ou* 頭, and when Ch'ên Yang in the *Yüeh Shu* states that the pipe is made of bamboo together with a 'head' of reed, there is no

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

reason to doubt that the *chia* was the double-beating reed itself.

Cylindrical double-reed pipes, such as *hichiriki*, *kuan* and the Thai *pi. âw*, are still distributed across Asia as far West as the Caucasus and North-east Anatolia. While the more westerly types have a single, rear thumbhole, the East Asian types tend to have two thumbholes. The reference in Po Chü-i's poem (Gimm, p. 438) to nine holes implies seven fingerholes and two thumbholes. Since only the upper thumbhole functions in assisting transition to the upper register, it has been suggested that the two thumbholes of East Asian pipes are a survival of those of the *monaulos* of Late Antiquity *). These in turn, it is supposed, were derived from the two thumbholes, one to each pipe, of the ancient Greek double pipe, the *aulos*, the players having become accustomed to having a hole available for each thumb.

From the presence of the restraining, flattened hoop (tuning bridle) surrounding the *pi-li*-reed in T'ang times, it is likely that their tone resembled that of the *hichiriki* today, with a strong 'beat', presumably due to interference between the vibrating reed and the elastic loop. The modern Chinese *kuan* has a more saxophone-like quality, and its reed is lipped to yield a range of at least two and a half octaves. As Five Dynasties' paintings and woodcuts in the *Yüeh Shu* reveal, tuning bridles must have persisted in use at least until Sung times.

There is no reason to doubt the reality of the *shuang pi-li* 雙 | | mentioned in *Wên-hsien t'ung-k'ao* (Gimm, p. 438). *Shuang kuan* are in use in China today; and paired reed-pipes—though more commonly paired pipes with single-beating rather than double-beating reeds—are distributed discontinuously across Asia from East to West and extend into North Africa. The reason for the pairing of unison pipes, in China and elsewhere, is the marked increase in intensity and stridency obtained by so doing. This effect is particularly marked if (as is usually the case) the unison between the pipes is not quite perfect.

Although the precursors of the *pi-li* seem to have been natural horns, with or without reeds, there is no evidence for the presence of *suo-na* type shawms in China in T'ang times, and indeed this name does not appear to be attested before the Ming.

---

*) See Anthony Baines: *Woodwind instruments and their history*, 1957, p. 202.

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

VIII. Military Music

It is to be regretted that no one has made a survey of Chinese military music (Gimm, pp. 149-154), for what the Chinese appear to have borrowed from foreigners on their northern borders resembles strikingly what Western Europe borrowed from the Turks. The instruments both of the *Ku-ch'ui-pu* 鼓吹部 and of the *Mehter takım* of Western Turks consist of drums, cymbals, trumpets and reed instruments. There are also parallels between Chinese and Western Turkish usage in the association of the *ku-ch'ui* music in the Northern Ch'i period (Gimm, p. 579) with the performance of magicians and acrobats. Such an association is confirmed for eighteenth-century Turkey by miniatures illustrating festal entertainments in Istanbul, such as those in the *Surnāme-i Veḥbi* (Topkapı Saray Müzesi, No. 3593-4) (Metin And, *A history of theatre and popular entertainment in Turkey*, Ankara, 1963-1964).

The inclusion of *hsien-t'ao* in the list of instruments employed in the music of the Imperial escort (Gimm, p. 149), makes it very doubtful that the *hsien-t'ao* was a lute (p. 102). I am inclined to speculate that the 'strings' of the *hsien-t'ao* were the strings peculiar to it as a rattle-drum. A rattle-drum makes a splendid noise, and the inclusion of these in the *ku-ch'ui* music makes practical sense, where the inclusion of lutes does not. Whether *hsien-t'ao* was merely a rattle drum, or whether *hsien* has been introduced into the text mistakenly because of previous references to *hsien-t'ao*, there can be little doubt that lutes never figured in this ensemble. They are absent from the list of military instruments for the mid-T'ang period (Gimm, p. 152).

IX. Performance

In the course of the *Yftl*, and in Dr Gimm's many supplementary extracts from other texts, a number of references to the manner of performance of music occur. We may begin with 'conducting' in the sense of initiating or terminating co-ordinated action by musicians and associated performers. Whether the staves, decked with pheasant feathers, carried by the *hsieh-lü lang* 協律郎 (Gimm, p. 105) were raised or lowered to begin or end the music cannot now be determined (Gimm, pp. 138, 139); but it is evident that a sign, probably visual, was given by their use to the musicians and also to another *hsieh-lü lang* in the other part of the entertainment area, who in turn relayed the gesture to adjacent performers. In the days of the old *ya yüeh*, the sign was given to the player of the *chu* 柷

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge

to give the audible signal to start; or to the player of the *yü* 敔 to give the audible signal to end.

The need for a signal to mark the end implies that the duration of a piece, including the number of repetitions, was not automatically specified. The number of *tieh* (p. 85) was (at times at least) variable, and the performers needed a signal to tell them that the approaching cadence was to be the final cadence.

The author makes the very reasonable suggestion that some kind of alternation in performance occurred between a large standing, purely vocal (?) group—*li ch'ang* 立唱—and a smaller sitting, purely instrumental (?) group (Gimm, p. 222). On the other hand, the suggestion that the *Li Chi* passage (Gimm, p. 241) means that the tessitura of the human voice in mixed vocal-instrumental ensemble was higher than that of the instruments is not very likely to be true. It would certainly be quite contrary to existing Chinese practice, where voice and supporting instrument are at the unison, or the voice is an octave below the instrument in the case of male voices.

Many charming anecdotes remain vividly in the memory after reading this volume: Ho Huai-chih (Gimm, p. 337) tuning the instruments one after another on Imperial musical (and presumably amateur) occasions; the penetrating *wei-shê* 逶迤 (*vibrato*?) of Han O which caused 'roof-timbers to float and clods of earth to dance for three days' (Gimm, p. 242); and that of the audience that joined in a song, as it were in a refrain (Gimm, p. 190). Among the moving stories of the singer Yung-hsin 永新, the emperor's command to the *ti* player, Li Mo 李謨, as the echo of her singing, from nine crossroads away, reached the cool moonlit terrace was, perhaps: 'to play the melody on the flute and follow her singing' 吹曲逐其歌 rather than 'diesen Gesang auf der Querflöte zu blasen'; for in Tuan's usage, *ko* 歌 seems invariably to mean 'singing' or 'song in general' rather than 'a song'. In the incident of Wei Ch'ing 韋青 hearing someone in a boat singing *Shui t'iao* as he leans on the balustrade of a bridge (Gimm, p. 235), the meaning of his words was perhaps: 'This is the singing of Yung-hsin!' (此永新歌也).

It is unnecessary to emphasise what Dr Gimm has made available in this searching study. If more can be said on certain topics, this is no reproach to him. Many of the publications referred to in these comments could not have been seen by him because of present difficulties of communication. He has made a distinguished contribution to the history of Chinese music.

Downloaded from Brill.com07/13/2022 07:00:22AM
via University of Cambridge